

# ENDURANCE

## NEWS

BY HAMMER NUTRITION

#126 August/September/October 2021

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*IN THIS ISSUE*

### **Breaking CBD News!**

Hammer CBD Passes All Drug Tests

### **Hélio Castroneves wins fourth Indy 500**

Hammer Athlete pulls off a stunning victory.

### **The Sodium War Is Over**

New data shows less sodium improves performance.

#### *PLUS*

- **GOOD NEWS:** Hammer has what you need to break the sugar cycle.
- More and more new products are on the way!



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# ROAD TO TOKYO

**Nikole Barnes** and **Lara Dallman-Weiss** train for the Tokyo Olympics. The Hammer fueled duo are both United States Coast Guard Lieutenants, and will be the first active duty female officers in history competing in the Olympics for Team USA.

Photo: Joana Liz Filipe

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# Welcome to the 126<sup>th</sup> issue of Endurance News!



**T**his has been a BUSY summer here at Hammer HQ in Northwest Montana developing new products, improving products, systems and technology, all with the singular goal of better helping you in every way we can. My relentless pursuit of excellence can be confounding to staff members, and even clients. After all, we already have the best products in the industry, we definitely have the best customer service in the industry (maybe the world!), and we provide the most effective free educational materials that empower you to “Fuel right and feel great!®”

Forgive my momentary lack of humility, but I figure it's okay to toot my own horn once a decade or so.

However, we can always do better and I just love problem-solving and finding areas where we can refine/improve so we can serve you even better. It's a

simple “formula” that has served me well for the past 34 years: innovate, refine, improve, repeat! This issue is jam-packed with important and exciting new actionable information that you can put to use

immediately. Awesome articles from Steve, Dr. French, Dean, and Miles, among others!

This issue also includes a number of excellent articles on the good news about sugar and salt. I say “good news” because every new study and research that comes out reminds us of the evils that these substances represent in our diet and is further encouragement to minimize your dietary intake of these substances. Best of all, you can massively improve your health and your athletic performance for FREE!

While many of you are still discovering some of our recent additions like Hammer PHOOD and HEED® Cherry Bomb flavor, there's a whole slew of new products in the pipeline and on shelves. Single servings and 15 serving containers of Chocolate and Unflavored PHOOD are in stock and flying out the door. And EnDuro D will be shipping by the time you read this. But

wait, there's more: in the coming months we will be introducing exciting new products including a an awesome vitamin C formula, 50 mg CBD softgels, and a number of full-spectrum CBD products in tincture and water-soluble, nano-emulsified softgels.

Also in this issue we have the results of our four months-long and ongoing testing program to verify that you can take Hammer CBD and pass any drug test. If you are in the situation where your employer requires drug testing and have not used CBD products up until now, you can now do so with peace of mind knowing it will test negative.

Race results are starting to trickle in with the biggest one being our friend Hélio winning the Indy 500 for the fourth time at age 46! Congratulations Hélio! More Nocciola Hammer Gel®, Chocolate Recoverite®, Chocolate PHOOD, and Peanut Butter Chocolate Whey Protein Hammer Bars® are shipping now!

Before signing off, I just want to remind you that we value your feedback immensely and we want to hear from you good bad or otherwise.

Enjoy the read and the rest of your summer!

*Brian Frank*

Brian

**ON THE COVER:** A crew backpacks through the Idaho wilderness on the hunt for adventure. To keep up the pace, electrolyte replenishment and proper hydration are key. That's why **Endurolytes® Fizz** is the best way to add a full spectrum of electrolytes (and delicious natural flavors) to your water bottle. Photo: Justin D Kauffman





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## MISSION

*Endurance News* provides informative and inspirational content to help endurance athletes like you achieve peak performance and health. The views expressed favor a healthy diet, hard training that emphasizes quality over quantity, and prudent supplementation to improve health and performance. Back issues are available at [hammernutrition.com](http://hammernutrition.com).

## OUR GUIDING PRINCIPLES

**Service:** From day one, we've strived to treat each client fairly, honestly, and individually. Your trust is our top priority.

**Education:** We educate and empower athletes with free, easily accessed information on health and performance.

**Principles Before Profits:** Profits never take priority over our values. If it says "Hammer Nutrition," it's good for you.

## OUR CORE VALUES

**Innovation:** Our development of new, cutting-edge products and categories has led the field since 1987.

**Product Integrity:** Our consumables are researched, tested, and USA-made to the strictest standards.

Read our complete mission statement online at [hammernutrition.com/company/mission-statement](http://hammernutrition.com/company/mission-statement)



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# In this issue, discover the best ways to fuel without using sugar.

Read more on pages 12, 24, 30, and 60

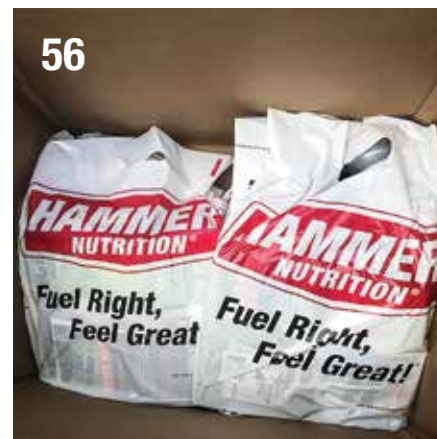


**Hélio Castroneves** wins record-tying fourth career Indianapolis 500 fueled by Hammer.



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With Vitamin D and K having so many benefits, **EnDuro D** synergizes the two to create a highly absorbable and multi-beneficial softgel for bone, arterial, and overall health.



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Pick up your race bag at the next Hammer-sponsored event! We support all our events with high-quality fuels to help you WIN: no junk at the aid stations. See our upcoming events on **page 56**.

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# BREAKING NEWS!

## Hammer CBD Passes All Drug Tests

*First published on ENW, June 16 2021.*

by BRIAN FRANK

The results are in! You can safely take Hammer CBD and pass any drug test.

I'm reporting our findings after 120 days of usage and testing. Not surprisingly, all three test subjects passed tests with flying colors!

Since the introduction of Hammer Nutrition's CBD products, we have heard from hundreds of clients who are excited about the benefits of CBD but scared to use it. Even though our product is labeled 0.0% THC, we get the same question over and over: "If I take your CBD, will I fail my drug test?" This is a question that I have been very keen to address.

Other clients have been told they should only use CBD isolate, because broad-spectrum CBD products could lead to false positives due to the other cannabidiol components (CBG, CBN, etc.).

Saying a product does not contain a substance and verifying this through ingestion and testing are two different things. So, I decided to develop a simple protocol that would answer this question once and for all.

*Continued on page 8*

Photo: Amanda Foley





# The GOLD Standard



## "PROMOTES RESTFUL HEALING"

*"I use **Hammer CBD** after a long run or full day of climbing. It helps me to get deep, restful sleep so I can recover properly on my off days." - Chelsea S.*

- Aids quality sleep
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# Hammer CBD Passes All Drug Tests

by BRIAN FRANK

*Continued from page 6*

A five-panel urine test, with a limit of detection (LOD) of 1 part per billion, is the most sensitive, most accurate, and most widely used drug test available. It is used by DOT, law enforcement, military, fire, medical, and for most corporate drug tests. The goal was to determine the answer to both client questions.

For test subjects, I found three people who have never consumed THC before. Details of each subject and their specific test results can be found on the next page.

After passing the initial control test, all three subjects began consuming 50 mg per day of Hammer Nutrition's water-soluble nano-emulsified CBD. Tests were conducted at 30 days and 60 days. After the 60-days, none of the three subjects showed any signs of THC in their system. Two of the subjects then ended their trial.

The third subject (Subject C) was happy to continue the tests and accelerate the dosages being consumed daily with each successive negative test. After the 30-day test, he increased his daily dosage to 100 mg per day. Every 30 days, the dosage was increased by 50 mg per day. All tests were negative. We will continue this process of increasing dosages in 50 mg increments and testing every 30 days until we reach 180 days of consumption.

At 310 pounds, Subject C is approximately twice the weight of our average client. That's why we are testing abnormally high dosages. On a side note, he is reporting amazing results in the usual areas of benefits with regard to sleep, quality, relaxation, and mood.

## PARTICIPANTS

<b>Subject C</b>	male	37 years old	310 lbs	42.0 BMI
<b>Subject M</b>	male	28 years old	180 lbs	27.4 BMI
<b>Subject S</b>	female	36 years old	175 lbs	27.4 BMI



## CONCLUSION

We set out to answer a very important question: If you take Hammer CBD, will you fail a drug test? The answer is an emphatic NO! I realize the consequences of failing a drug test could be catastrophic. However, I also know many who desperately want to have access to CBD and its myriad benefits but are being told not to risk it.







I cannot speak for any other brand of CBD, but I am 100% confident that you can use Hammer Nutrition's CBD products with complete peace of mind. They will not cause you to fail any drug test.

## 5-PANEL URINE ANALYSIS

Drug Name	Lab Screening Cut-off*	Lab Confirmation Cut-off*
<b>Marijuana</b>	50ng <sub>1</sub> /ml <sub>1</sub>	15ng/ml
<b>Cocaine</b>	300ng/ml	150ng/ml
<b>Amphetamines</b>	1000ng/ml	500ng/ml
<b>Opiates</b>	2000ng/ml	2000ng/ml
<b>PCP</b>	25ng/ml	25ng/ml

\*Represents laboratory screening and confirmation values. Results above the cut-off level indicate a positive test.

[1] Nanograms per milliliter = [1] Parts per Billion (ppb) / 0.001 Parts per Million (ppm)

60-DAY HAMMER CBD SYSTEM LOADING			
Lab Analysis	Hammer CBD Daily Dosage	Subject M Results	Subject S Results
Initial Control Test 1/19/2021	0 mg	0 ng/ml*	0 ng/ml*
30-Day Testing 2/23/2021	 50 mg daily	0 ng/ml*	0 ng/ml*
60-Day Testing 3/22/2021	 50 mg daily	0 ng/ml*	0 ng/ml*
120-DAY HAMMER CBD INCREASED SYSTEM LOADING			
Lab Analysis	Hammer CBD Daily Dosage	Subject C Results	
Initial Control Test 1/19/2021	0 mg	0 ng/ml*	
30-Day Testing 2/23/2021	 50 mg daily	0 ng/ml*	
60-Day Testing 3/22/2021	 100 mg daily	0 ng/ml*	
90-Day Testing 4/26/2021	 150 mg daily	0 ng/ml*	
120-Day Testing 6/7/2021	 200 mg daily	0 ng/ml*	

\*Results were found to be negative for all 5 substances

## TEST RESULTS

All subjects were tested with a 5-panel urine analysis for detecting Methamphetamines and Amphetamines, THC (Tetrahydrocannabinol), Cocaine, Opiates and PCP (Phencyclidine). All subjects confirmed that there were not any of these substances in their systems. All received an “N” for negative. All subjects then began to consume 50 mg daily of Hammer CBD softgels (phytocannabinoid-rich hemp oil, made from the whole plant).

### 30-Day Testing

All three subjects tested negative for all five drugs and Subject C increased his dosage to 100 mg daily.

### 60-Day Testing


The next day of testing showed the same negative results for all five drugs for each subject. Subject M and S stopped the trial after 60 days while Subject C continued increasing his dosage.

### 90-Day Testing

Subject C tested negative for all five drugs again and increased his dosage to 200 mg daily.

### 120-Day Testing

Subject C tested negative at 120 days and will continue to increase his dosage every 30 days by 50 mg to gather more data.

The results after 120 days of testing concluded that the usage of Hammer CBD (0.0% THC) and derivatives (CBG, CBN, CBC, CBD-A, CBDV) will not cause a false positive for THC. If there is any THC found in urine samples, it would be safe to say that the failed subject has consumed marijuana (tetrahydrocannabinol). THC usually stores within lipid cells up to a month after THC consumption, depending on the consumer's BMI. Test subjects in Hammer Nutrition's CBD system loading (30-, 60-, and 90-day), ranges from 27.4 BMI to 42.0 BMI, proving that our product will not cause a failure in testing. 



# RECOVERY UPGRADED

by DEAN KARNAZES



Dean relaxes after a run near his house in California. Photo: Miles Frank

**T**he 100K race had gone well. Although the course was a challenging one, my performance had been good, handily winning my age group and taking 4<sup>th</sup> place overall. Now came the second challenge, trying to get a good night's sleep after an ultramarathon.

I followed my usual post-race protocol. First came an ice bath with epsom salt. Next was a healthy dinner that included an ample serving of salmon. Cold-water fish is my go to protein source following an ultra (for the high quality protein, ease of digestibility, and omega-3s). Finally came the hydration routine, drinking enough water to avoid nighttime dehydration. But this time I tried something different. A friend had recommended CBD so I took a

25 mg softgel capsule before hitting the hay.

I woke up in the morning drooling on my pillow. Never had I had such a sound night's sleep following an ultra. I also felt less sore than normal. Perhaps due to the excellent sleep, I don't know. All I know is that my muscles and joints felt amazingly spry.

Let's start with debunking some myths about CBD. First of all, CBD will not get you high. Second, CBD is not a banned substance. You can use it during competition. And lastly, CBD is legal in all 50 states, so you're not going to get busted.

Those things apply to all CBD, but, not all CBD is created equal. The quality and type of CBD make a big difference. And as an

athlete, you want to make sure you're consuming the highest quality possible.

So let's talk about quality. One thing you want to be absolutely sure of is that the company supplying the CBD has a Certificate of Analysis (COA) displayed on their website. The FDA allows up to 0.3% THC in CBD (THC is the psychoactive component that will get you high). Personally, I look for products certified with 0.0% THC. I also look for organically grown, non-GMO, USA-raised sources of CBD. These things are important to me.

Now let's turn our attention to the three main types of CBD sources: Isolates, Full-Spectrum, and Broad-Spectrum. You can think of these as good, better,

best. CBD isolates have very few other bioactive compounds. Full-Spectrum CBD contains other beneficial bioactive compounds, such as terpenes and additional cannabinoids. And Broad-Spectrum CBD has the highest levels of terpenes and additional cannabinoids. This is why Broad-Spectrum is best for an athlete.

Not only do I use CBD orally, I also use CBD balm. Here again, quality matters. Remember, what you rub on your skin eventually ends up in your bloodstream. If I'm putting something in my blood I want to make sure it's the highest quality possible! Look for all-natural ingredients, organic and non-GMO. And if it smells good, all the better. Some CBD balms smell like the backseat of your buddy's 1968 VW bug. Spicoli!

Kidding aside, if you decide to try CBD, do take the time to ensure you're getting the best quality. Then you too can sleep and recover like a baby. **EN**



Hammer Nutrition athlete Dean Karnazes is an ultramarathoner and author of *A Runner's High*. He's raced and competed across the globe and is a recipient of the President's Council on Sports, Fitness & Nutrition Lifetime Achievement Award.

# The GOLD Standard



**"EXCELLENT QUALITY CBD!"**



*"I have tried other brands and Hammer CBD is noticeably higher in quality. It is very effective for aches and pains, and as a sleep aid. Definitely will recommend it again and again!" - J. Kingsley*

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# Sugargate

ENDURANCE NEWS #108

by STEVE BORN

Nearly 50 years ago, the Sugar Research Foundation (SRF) funded Project 259, an animal study examining the effects of sucrose (table sugar) on cardiovascular health. However, according to recent findings from the University of California at San Francisco,<sup>1</sup> when the evidence appeared to show a link between sucrose, heart disease and bladder cancer, Project 259 was cut short and the results were never published.

Fast forward a few decades to a study<sup>2</sup> published in 2016, showing that mice on a high-sugar diet were more likely to develop breast cancer. A major sugar lobbying group, the Sugar Association, basically brushed off the results, calling them “sensationalized,” and stating that “no credible link between ingested sugars and cancer has been established.”

Only a few months later, another disturbing detail surfaced: in 1967, the SRF paid off three Harvard scientists to make sugar seem less unhealthy and instead claim that fat in our diets was the real villain.

While decades of research have shown sugar’s detrimental effects on health, once again it appears that “Big Sugar” has been manipulating the science—even burying the results of their own project. If sugar is innocent, why would the sugar industry suppress evidence or pay off scientists to produce a research paper whose sole purpose was to shift the blame away from sugar?

The fact is that sugar is NOT innocent, as we at Hammer Nutrition have been zealously proclaiming for 30+ years. Sugar IS harmful to your health. A decade ago, the estimated number of deaths worldwide that were specifically caused by elevated blood glucose was a staggering 3.2 million annually. With the sugar industry covering up and manipulating any research that points a finger at its product, how much higher must that number be today?

Stanton Glatz, co-author of this latest revelation of the sugar industry’s shady side, states: “The kind of manipulation of research is similar to what the tobacco industry does. This kind of behavior calls into question sugar industry-funded studies as

a reliable source of information for public policy making. Our study contributes to a wider body of literature documenting industry manipulation of science.”

Since day one, we have NEVER deviated from our recommendation to reduce or eliminate simple sugars from your diet and the fuels you use during exercise. Sugar is NOT good for you and it DOES NOT promote optimal athletic performance and health. That’s why, unlike many widely available sports energy products, Hammer Nutrition fuels—**Hammer Gel®**, **HEED®**, **Perpetuem®**, **Sustained Energy**, and **Recoverite®**—have no added refined simple sugars.

#### REFERENCES

[1] Cristin E. Kearns, Dorie Apollonio, Stanton A. Glatz. Sugar industry sponsorship of germ-free rodent studies linking sucrose to hyperlipidemia and cancer: An historical analysis of internal documents. *PLOS Biology*, 2017; 15 (11): e2003460 DOI: 10.1371/journal.pbio.2003460

[2] <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4703949/>

#### EN BIG SUGAR’S LIES

Read more about the sugar industry on page 60

# Real Fuel, Ready to Roll !



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# FISHY

## Research Exposed

by STEVE BORN



## Essential Omega-3s : Don't take the misleading bait.

**F**ish and fish oil supplements contain two primary omega-3 essential fatty acids: EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid), with smaller amounts of DPA (docosapentaenoic acid). Our bodies cannot make these fats; we have to obtain them from dietary sources or supplements.

It's no exaggeration to designate these fatty acids as "essential." Not only are they a key component in the structure of numerous parts of your body, including your brain, eyes, ears, and reproductive organs, they're an integral part of the membranes that surround and protect every cell in your body. Without an adequate supply of these essential fatty acids, most bodily functions will deteriorate.

Years and years of research have clearly shown that fish/fish oil supplements impart numerous benefits for many aspects of human health. That's why the headline of recent research conducted by a pharmaceutical company—Warning: Combination of Omega-3s in Popular Supplements May Blunt Heart Benefits—is downright scary. So is the study's conclusion:

*"...patients with the highest levels of EPA had reduced risk of major heart events. When evaluating how EPA and DHA affect one another, they found that higher DHA blunts the benefit of EPA. In particular, they also found that those patients with higher levels of DHA than EPA, were more at risk for heart problems."*

In a nutshell, this research seems to indicate that:

- 1) The omega-3 fatty acid EPA is most effective for supporting cardiovascular health when given in a purified form free of other omega-3 fatty acids such as DHA and DPA.
- 2) That the presence of DHA may promote unwanted outcomes.



We believe this research is misleading.

The conclusion conflicts with decades of research that shows that all omega-3 fatty acids are likely beneficial for cardiovascular health. In fact, a large body of evidence—far too much to list here; however, some studies are included at the end of this article—shows that the various omega-3 fatty acids may each contribute to cardiovascular health in unique ways, indicating that supplementing with a complete profile of omega-3 fatty acids will provide better support for cardiovascular wellness.

Whenever omega-3 rich foods are consumed, they will always contain both essential fatty acids, EPA and DHA, and they both supply different benefits for



*"We believe that this research may represent more of a commercial bias than what has been revealed through a long history of scientific investigation."*

human health. Omega-3s will always contain both EPA and DHA, and you want them both because of the benefits—unique and combined—that they each supply.

What the research didn't mention is...

*Continued on page 58*

# Delicious Refreshing Electrolytes



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- Light effervescent flavor
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# Fueling Right with HAMMER yields a **BIG WIN** for Josh Hernandez



## Hey guys!

I wanted to send in a review from my first race on a bike, a local Texas XC race at Big Cedar in Cedar Hill, Texas. I have been training really hard on the bicycle lately (mostly Zwifting) and saw this race series pop up. I hadn't ridden any mountain bike stuff for the past seven months but knew I could still show up and do well. I went out and purchased an Orbea Occam just one week prior to the race and was able to squeeze in two days of riding. I've always been the type to just Send It.

I showed up race day and didn't really have a clue what was going on as all this was so new to me. I signed up for Cat 3 19-29. The course was a 6.2 mile lap and we were doing two laps. I started my morning off with a few **Endurolytes® Fizz** tablets as it was going to be a pretty warm day. After check in and getting my packet I went back to get a warm up in before my start time. 20 minutes prior to my start time I took one **Hammer Gel®** and another **Fizz**

tablet. The nerves were super high on the start because of the unknown, however I was 100% confident in myself and knew I could win. I was on the second row and as soon as the whistle blew I stood up to clip in and the rider in front of me missed his clip, causing me to run into the back wheel. Rookie mistake I know. I fell over and lost the pack...I knew I had to charge hard to get up to the top three. There were seven of us total and right at about one mile in I was already in 2<sup>nd</sup> catching the leader. I was blowing up pretty bad at this point because my heart rate spiked so high after that start carnage. Three miles in I am right on the leader's wheel and we approach a pretty technical climb. We both chose the A line and he bobbled, allowing me a chance to attack and pass for the lead. Once I got in the lead he rode right behind me for the remainder of the first lap and we were holding a pretty solid pace. He tried getting in my

head by talking to me and trying to see where I was physically. I didn't let it get to me and could tell he was starting to get tired by his rate of breathing during conversation. I had a bottle of **HEED®** available and was sipping on that throughout the first lap. Once we started lap two, my wife was waiting with another bottle of **HEED** and a gel but I missed the grab. Not good, but I dug deep and pulled away from the guy in 2<sup>nd</sup>. Then I remembered I had an extra gel in my pocket and was able to get that in. I was able to open up a pretty solid gap and lower both the pace and my heart rate. I was really pumped that I had the win in the bag, but also completely zapped because I didn't fuel correctly. My total race time for me was 1:12 and I was only able to get in around





60 grams of carbs because of the missed bottle grab, so I was ravenous. Luckily my father in law had a hamburger waiting for me, so ate that and drank some water before consuming my bottle of **Recoverite**®. All in all I was really pumped to take the top step of the podium at my first race. I will be doing a few more races in Cat 3 before moving up to Cat 2 for 2022. I really appreciate the support I have from you guys and hope I can continue to get some results for Hammer Nutrition! **EN**



Photos: Bekah Hernandez.



#### SEND US YOUR LETTERS!

Drop us a line, share a tip, or tell us about your latest adventure.

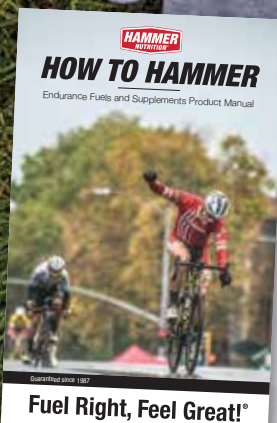
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# ESSENTIAL KNOWLEDGE



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# #howihammer

WHEREVER YOU GO,  
SHOW US HOW YOU HAMMER.

Use the hashtag #howihammer to  
share your photos!



scottthehut



**Scott Turpin** Early season alpine outing and @cgrahamer\_guide's first Black Wall voyage!! Sure helped me feel the psyche again!!!



bbloss37



**Benny Bloss** Injuries are hard to deal with, thankfully I have Hammer Nutrition CBD to help me through it!



nolan\_wong1



**Nolan Wong** Did Grizz for ol' times sake today with pops. Ideal conditions!





joshhenrie\_ultra



**Josh Henrie** I'm planning on running 5 peaks in one day. Miles will be about 45 miles and around 17,000 feet of elevation gain.



nikkinoodle7003



Photo: Allison Chenard



**Nikki Barnes** The weight gain program 💪💖 Fueled by Hammer Nutrition 🔨💥 LETS GO!



nationsnumber1feast



**Miles Frank** Ran with THE Dean Karnazes and he even showed me his stand up bike around the neighborhood!



joshhernandez357



**Josh Hernandez** Can't wait for next race and get back out there again. Fueling with the best!





# You ask, we answer

## Get your fueling in gear!

**“Can’t I just put everything I need in one bottle and be good to go?”**

The problem with combining your fluid, calories, and electrolytes into one container is that it will only meet your body’s needs in a very narrow set of temperature, duration, and intensity situations.



a reminder from BRIAN FRANK

## The All-in-One Convenience Myth Explained

**W**hile other companies tout the convenience of their all-in-one fueling products, our approach is quite opposite—with good reason.

Here at Hammer, we’ve spent 35 years proving that taking fluid, calories, and electrolytes separately guarantees the best possible fueling outcome. Combining all three into one container will only meet your body’s needs in a very narrow set of temperature, duration, and intensity.

The objective is to have the flexibility to stay on course from start to finish, across a wide variety of terrain, paces, inclines, speeds, and weather conditions.

These diverging scenarios can easily be met when you fuel separately. They cannot be managed efficiently by simply dumping everything into one bottle.



Single-Speed Cruiser

### Single-bottle fueling

The single-speed bike will work great on relatively flat surfaces at a moderate speed. But once you hit a steep climb or a long descent—now you’re inefficiently walking your bike uphill or coasting down due to your single-gear option.

So unless you exercise in the exact same flat and moderate conditions, the all-in-one bottle will leave you hanging every time.



22-Speed Road Racer

### Separate fueling

With a 22-speed bike you can change gears to handle anything that comes your way and still maintain maximum efficiency and pace.

By managing your fluid, calories, and electrolytes independently of each other, you’ll be able to make adjustments as conditions change. This flexibility is crucial since the temperature, humidity, terrain, and pace will undoubtedly change significantly between the time you start and when you finish.

# “Do I need to take Endurolytes® if I’m using Perpetuem® ?”

answer by STEVE BORN

**T**he short answer is “Yes.”, but let’s examine why.  
**Perpetuem is about the calories, not electrolytes.**

Perpetuem® does contain some electrolytic minerals; however, unlike **HEED®**, where the mineral content was intentionally added to the formula—each scoop of **HEED®** contains the equivalent of 1 **Endurolytes®** capsule—the mineral content in Perpetuem® occurs naturally from the components in the product, primarily the trisodium phosphate, soy protein, soy lecithin fat, and maltodextrin. The electrolytes in Perpetuem® were not added intentionally or by design.

## Comparison of mineral content in Perpetuem and Endurolytes

Mineral	Perpetuem (1 scoop)	Endurolytes (1 capsule)
Calcium	17 mg	50 mg
Magnesium	4.5 mg	25 mg
Potassium	41 mg	25 mg
Sodium	100 mg	40 mg
Chloride	0 mg	60 mg
Manganese	0.5 mg	0.5 mg

As you can see, the electrolytic mineral “profile” in Perpetuem is both incomplete and not well-balanced. Perpetuem® is a complete calorie source—complex carbohydrates, soy protein, and healthy, soy-derived fat—and should be used in conjunction with Endurolytes, Endurolytes® Fizz, Endurolytes® Extreme, or Endurolytes® Extreme Powder.

## BOTTOM LINE:

**Perpetuem = calories**

**Endurolytes = electrolytes**

Read more from Brian Frank on “The All-in-One Convenience Myth” in *Endurance News* #125



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- Scott H.*



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*We're here to help you Fuel Right and Feel Great!®*







# THE SODIUM WAR IS OVER!

by Brian Frank

There has been a debate going on in the sports nutrition industry for the past 25+ years. The opposing sides consist of the high sodium advocates and the low-sodium advocates. Until 1996, high sodium advocates had the stage all to themselves with an abundance of sweat studies to point to as evidence to support their side. Leading the low sodium side, we had a lot of anecdotal information from athletes, but not much more. That's all changed, and I'm happy to share this exciting new data today. You significantly improve your ability to tolerate heat stress by lowering dietary sodium intake!

With the introduction of Hammer Nutrition's Endurolytes® formula in 1997, a full-spectrum, all-chelated, proportionately balanced electrolyte replacement supplement, athletes finally had an alternative to the "salt pills" and the idea of consuming massive amounts of dietary sodium. Being an innovation- and education-centric company,

we introduced this innovative and revolutionary product in 1996 and began educating endurance athletes about the perils of a high sodium diet and high sodium replacement during heat stress exposure. The science supporting the myriad health benefits of eating a low-sodium diet, as well as the negative health consequences of eating a high sodium diet, is overwhelming and convincing: High sodium diets have long been associated as direct or supporting causes of high blood pressure, heart disease, and many other medical conditions prominent in this and most other western countries.

Despite all of this data, high sodium advocates somehow reason that if you are an endurance athlete exercising in heat stress environments, somehow magically sodium is now your friend, and you should consume it freely all the time. Wait, what? Perhaps it's my bias, but I've always found this illogical argument to be laughable and totally indefensible.

The sodium debate also brings a whole series of questions with it such as: Are some athletes naturally prone to high sweat rates when exercising in heat? Are some athletes also naturally prone to hemorrhaging large volumes of sodium during exercise in heat, when others do not?

More importantly, can an athlete who has historically shown excessively high perspiration rates and sodium losses change these tendencies through dietary intervention or any other means? To me, this is the "\$64,000 question!" And surprisingly, one that not very many people are interested in answering.

Historically, if you did an event in the heat and you had cramps or other heat stress related illness, conventional wisdom said you didn't drink enough and you didn't consume enough sodium, so the next time just take more!

This vicious cycle of confusion around the cause and effect of high sodium intake caused

more than a few athletes to suffer terribly during and after their hot events—the pain and suffering of cramps and GI distress as well as IVs in arms and trips to the hospital for hyponatremia.

Amazingly, this is still what some so-called experts in the high-sodium camp, which includes most competitor sports drinks and products, are still telling athletes today.

Conversely, we have argued since the 90s that an athlete's sodium losses and perspiration rates during exercise are nothing more than a reflection of their recent dietary sodium intake habits—high sodium diet begets high sweat rates and large sodium and therefore high losses during intense heat stress exercise. Just like they used to say at IBM, “GI-GO: garbage in garbage out.” I like the IBM analogy for sodium because it puts it in proper context, the more you consume, the more you will excrete.

Over the past 25 years, we have worked with thousands of athletes and have seen the universal reports coming back—lower dietary sodium reduces perspiration rates and electrolyte losses during intense heat stress events, allowing the athlete to perform to their true potential despite intense heat and humidity. “But where’s the data?” the skeptics ask, as they munch on a bag of salty chips.

Unfortunately, in the 90s and up until very recently, no data existed to support our position. No study that I have found sought to prove or disprove this hypothesis. One would need to take a group of athletes,



Ricky Taylor and Filipe Albuquerque winning the IMSA Mid Ohio race. Photo: Wayne Taylor Racing

establish baseline data, go through significant dietary modification, reducing sodium and sugar intake, and then post testing.

On the other hand, the high sodium camp can refer dozens of sweat studies in which perspiration rates and sodium concentrations were measured in athletes performing tests to exhaustion in laboratories. What did the athletes eat for days or weeks before they did the tests? Doesn't matter according to the high sodium camp.

Quite possibly an even bigger flaw in these studies than not recording or even considering an athletes dietary sodium intake prior to the test, is that they conclude that just because you lost X amount of sodium during a one-hour heat stress test, that you will continue to lose that same rate of sodium on an ongoing basis during multiple hours of competition. Wait for it...And thus, your sodium intake during exercise should match this number!

*Read about how we tested sodium loss with Wayne Taylor Racing on **page 62**.*

## **RICKY TAYLOR'S POST 12 HOURS OF SEBRING RACE REPORT**

“During the race, the intensity of the race was high, the car wasn't very easy to drive, all drivers were struggling with the car balance. However, physically, all of us felt very strong. I started with three stints and could've gone for a fourth but our strategist made the call for a change. Every driver took a 'bomb' on each stop and all reported they felt surprisingly fresh in the car and we all ended up doing more stints per cycle than anticipated. This meant we had more recovery time and less times cycling through the car with less driver changes. It was actually so few driver changes that we cut out almost an entire cycle and for my first time ever in Sebring, we each only drove the car two times. Normally we could mark down the lower fatigue levels to the car being easy to drive or the conditions being colder or the race being low pressure, but none of those were the case and all three drivers felt as fresh as ever. We even spoke to each other during the race, surprised how we were feeling in the car that we were going so much longer than previous years.” - Ricky



# Another Scoop On Sugar

First published on ENW, June 2 2021.

Continued from Endurance News #117

by DR. BAYNE FRENCH M.D. D.C.

There is something special about sugar, beyond its heavenly taste. It seems that sugar is capable of doing things that other sources of carbohydrates just can't pull off. It's so special in fact, that it's "toxic," according to researcher Dr. Robert Lustig. He concluded that sugar has dramatic detrimental effects on metabolic health irrespective of calories or changes in weight.

In a 2015 study originally published in *Obesity*, and later in *TIME* magazine, Dr. Lustig simply replaced, calorie for calorie, all the sugar that a group of adolescents ate with starch. Yes, you read this correctly. They replaced sugar carb with complex, starchy carb. The results were alarming. These adolescents lost weight, they went from insulin resistant to insulin sensitive, and had

much less fat in their liver. Lustig states, "We gave them crappy food, shitty food, processed food-and they still got better. Imagine how much even better they would have gotten if we didn't substitute, and took sugar out."

Prior to this, many studies established *correlation* between sugar and metabolic disease; many feel this study proves *causation*. Sugar IS special, in a sinister, toxic kind of way.

I have observed similar findings in my adult patients. Athletes who fuel with simple carb/sugar show similar laboratory results to obese, poorly controlled diabetic patients: Elevated blood sugar and insulin levels, high triglycerides, low HDL (favorable cholesterol), small and dense LDL (bad cholesterol) particles, and high CRP (inflammatory marker).

As discussed in “The Scoop on Sugar” in *EN* #117, sugar (sucrose) is made up of glucose and fructose in equal amounts. High fructose corn syrup has 75% fructose. Every cell in our body can metabolize glucose, but only the liver can process fructose. Sugar hits the bloodstream like a freight train, stimulating the liver to produce fat in a process called lipogenesis. I’m told foie gras (made from over-fattened duck’s liver) is delicious, but it’s not a healthy situation for the ducks, and same goes for us.

Another interesting observation I’ve made over the years in sugar eaters and drinkers who are lean is that they can have isolated liver enzyme elevations. Their blood sugar and cholesterol profile may be normal, yet their liver is inflamed despite low levels of alcohol consumption. A liver ultrasound report commonly states “increased echogenicity, suggestive of steatosis.” Fatty Liver Disease. I read recently where this practice of feeding ducks and geese large amounts of carb to form yummy fatty liver is now considered inhumane in the culinary world. I don’t disagree, but it’s hard not to laugh, as many people do it to themselves at every meal, snack, and training session. Here I go... I’m coining it...FGISEAS (Foggy Seas)—Foie Gras In Sugar Eating Athletes Syndrome.

Let’s talk about immune function for a moment. I can remember my mother saying “if you eat that you’re gonna catch a cold” in reference to some next-to-never sugary treat I had access to in my strange upbringing. What a smart lady. Many articles reference a 1973 study published

***I consider the evidence irrefutable that sugar (meaning all simple carb sources) are not benign substances, even though our brain drives us to seek them out.***

in *The American Journal of Clinical Nutrition*, where immune function was measured after sugar consumption. Phagocytosis is a process where white blood cells literally engulf microbial invaders (viruses, bacteria, fungi). They have a zero tolerance policy for outsiders, which makes them the O.X., Original Xenophobes. Blood was drawn from a willing participant multiple times after consuming some sugary crap. Their blood was then incubated with *Staphylococcus epidermidis*, a bacteria that commonly lives on our skin. The “phagocytic index,” which is the number of bacteria observed within each white blood cell, was then measured. The decrease in the phagocytic index was rapid following the ingestion of simple carbohydrates. The effect was greatest 1–2 hours after sugary nastiness was consumed but extended for at least 5 hours. The number of white blood cells was not reduced; only their function was impaired.

There were two other very interesting observations:

1. This impaired immune function was seen only with consumption of simple carbohydrates like glucose,

fructose, sucrose, and orange juice. Longer chain, complex carbohydrates did not have this effect.

2. Fasting for 36 hours or more significantly increased the phagocytic index (refer to *EN* #123 and #124 for my two articles on intermittent fasting). Now more than ever I want my white blood cells to phagocytize basically anything that moves.

And then there’s heart disease. What is worse than heart disease? Dying from heart disease. Most previous studies focused on sugar-sweetened beverages and their effect on weight gain, obesity, distorted cholesterol, type 2 diabetes, high blood pressure, and cardiovascular disease (CVD). *JAMA Internal Medicine* looked at total sugar consumed (solid and liquid) and the risk of actually dying from CVD, using data collected via NHANES (National Health and Nutrition Examination Survey). This is a series of surveys of the US population that in 1999 became a continuous program. It consists of a comprehensive interview and a physical examination of each survey participant.

*Continued on next page*



## Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults

Continued from previous page

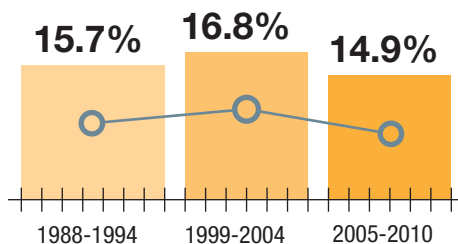
This study was comprised of two components:

1. Analysis of total sugar consumption
2. The association of this consumption with CVD mortality (becoming dead)

Over 30,000 individuals were included in this study over the course of decades and it became pretty apparent that to enhance your probability of remaining undead, super minimization of sugar is advisable.

### % of daily calories consumed from added sugar among US adults

Adjusted Mean Percentage



There is no universally accepted guideline for limiting added sugar consumption. The World Health Organization (WHO) recommends that less than 10% of daily calorie consumption should be from added sugar. The Institute of Medicine recommends that no more than 25% of your daily calories should be from added sugar. A quarter of our daily caloric consumption from added sugar? Are these people serious? Are we being punked? At least there is the strong verbiage “no more than!” One can of soda contains about 35 grams of sugar, so if you consume about 2000 calories per

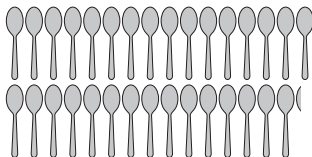
day, make sure you consume “no more than” 4 cans of soda per day. One sip more and you’re done for!

### Inconsistency in added sugar consumption recommendations

\*Numbers based on a 2,000 calorie diet.

#### Institute of Medicine

125 grams (31.25 tsp) of sugar



#### World Health Organization

50 grams (12.5 tsp) of sugar



#### American Heart Association

37.5 grams (9.38 tsp) of sugar



#### 2010 Dietary Guidelines for Americans

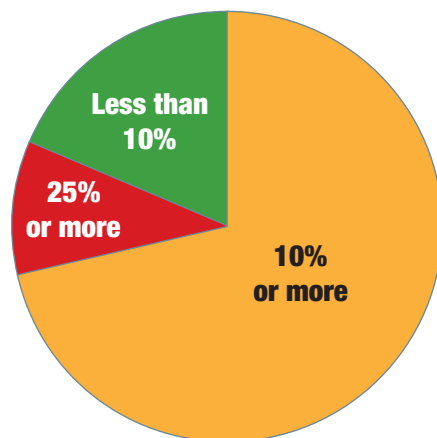
25 grams (18.75 tsp) of sugar



I know what you’re thinking, “So what did the study show, ‘Frenchy,’ you desk-pounding fanatic!?” Participants who ate or drank sugar greater than or equal to 10% but less than 25% (the level below the Institute of Medicine recommendation and above the WHO recommendation) had a 30% higher risk of dying from CVD. Yes there’s supposed to be a 0 after that 3. And for those who thumbed their nose at the generous Institute of Medicine recommendations and consumed more than 25% of their calories from added sugar, their risk was nearly tripled. Maybe there are a few regular exercisers out there reading this. And maybe you’re thinking the rules of biochemistry somehow don’t

apply to you because you just “burn it off.” Well unfortunately the observed association between sugar and dying was consistent across age, gender, race, educational levels, weight, and physical activity levels.


### % of daily calories consumed from added sugar (2005-2010)



#### NHANES US Adults

10% or more calories from sugar ..... **71.4%**  
25% or more calories from sugar ..... **9.9%**

I consider the evidence irrefutable: sugars (meaning all simple carb sources) are not benign substances, even though our brain drives us to seek them out. Patients with diabetes, whose blood sugar is chronically elevated, have a dramatic increase in disease burden, including infections. But the consequences from repetitive blood sugar spikes following a soda, sports drink or sugary snack cannot be discounted. Dr. Lustig showed that sugar had particular nasty metabolic effects on young people that longer chain, complex carb sources just did not. And in the early 1970s simple sugar carb sources, not complex carb sources, were shown to directly inhibit our immune system’s ability to kill germs. Enjoying

one's diet is paramount, and I'm not a zealot, but choosing to reserve your dietary and exercise carb choices to quality, organic, and complex sources makes very good biological sense to me. I see people every day who have lost the ability to move their bodies. This glorious act many of us take for granted is lost to them. It behooves us fortunate souls that still possess this gift, and regularly do it at exhaustive levels, to eliminate the ingestion of disease-promoting toxic sugar. The healthiest people I see have demoted sugar from a staple to an occasional garnish. And that's what I try to do. 

References available upon request



Dr. Bayne French MD DC is Hammer Nutrition's medical advisor. Along with an MD from the University of Washington, Dr. French brings over 20 years of health experience, with a focus on wellness, to the Hammer team. Dr. French currently works at Glacier Medical Associates and is double board certified in Family Medicine and Obesity Medicine. Bayne picked up obstacle course racing in 2013. He won the Masters division of the Bigfork, MT Spartan Beast (2016) and the Monterey, CA Spartan Super (2016). He competed in the Spartan World Championship Ultra Beast in 2016 and earned a 2<sup>nd</sup> place finish in his division.



## LIVE CHAT DONE RIGHT!

### We are at your service!

If you ever have a question or need fueling advice, the time to call is BEFORE your event, not after.

Since introducing Live Chat at the beginning of 2021, we've had a LOT of people take advantage of the most personalized service in the business.

Whether it's questions about ordering, shipping, product information, fueling advice, and much more, we're here to help. Best of all, you'll be corresponding with a live member of the Hammer Nutrition staff.

Some issues need more time for an in-depth discussion, so call today for a free consultation.

You can also email us anytime with your fueling questions, supplementation concerns, or general product inquiries.

There is always someone available to help you here at Hammer—all you have to do is ask. We offer superior quality products and the support you need to achieve your best results.

### What's all the chatter about?



*"Steve was awesome. I enjoyed chatting with him very much. He really knows his stuff!" – John B.*

*"Excellent customer service and very knowledgeable live chat help!" – Janet H.*

*"Thank you for the great products, knowledge and customer service!" – Dana K.*

*"Always wonderful! Hammer treats me like I'm their only customer." – Cynthia R.*

*"Steve clearly answered my questions and confirmed many of the choices I've made are on track for the type of activities I participate in." – Rob O.*

*"It's always a pleasure chatting with a real person." – Jack T.*



# LUIS REYES *HAMMER ATHLETE*

## Cause and Effect

by LUIS REYES



Understanding that life is cause and effect enabled me to create opportunities and accomplish childhood goals. I came to this understanding by being the protagonist of my own story but it's definitely not easy to share. Though I've always said that "Running is a Gift", its meaning didn't fully take form until after my "Life is Cause and Effect" understanding occurred.

I grew up on a small ranch (known as Hell's Half Acre) in Two Medicine, Montana. Even as young kids, work was always priority for my cousins and me. One evening after all the daily chores were done, we were watching a TV program on one of the few channels our antenna could catch. The program documented ultrarunners as they ran a course for a seemingly impossible distance and time. As crazy as we all thought it was, I was also intrigued. Not to be ridiculed, I promised myself in silence that I would run an ultramarathon one day.

My running career as a student-athlete was nothing extraordinary. I ran forgettable times during my cross-country races while the other sports I was involved with used running as a form of conditioning or punishment. After my educational years, running was strictly capped at 2 miles to meet/maintain the minimum fitness standards of the United States Army.

As I grew into adulthood, childhood goals became distant and I lost sight of what was once important. I still wanted to run an ultramarathon but this goal was demoted to the bottom of my to-do list. Things that needed to be done for my family and career now came first. Simultaneously, I reveled in an embellished social life that went hand in hand with overconsumption of alcohol. During this time I believed in luck and circumstance; thinking the world was simply happening to me as I poorly adapted to arising issues. As more problems materialized around me, so did my levels of stress and overuse of alcohol. I succumbed to stereotypes, did things that didn't align with my personal goals, and was content living within the confines of my self-imposed limitations.

Being from a small town, having a military background working in civilian emergency response, I was conditioned that if "someone needs help and you're able to help, you help." Such was the case when I volunteered to help a friend in need during Hurricane Harvey. Unfortunately, I suffered life threatening injuries at the hands of the individual my family and I were helping, including a debilitating head injury to which I attribute no recollection of the incident. Sadly, alcohol was involved. I woke in hospital with my body completely nonresponsive. I was conscious but unable to move

*"My relationship with Hammer has made an enormously positive impact. They have given me the tools and confidence to continue competing in the sport that saved my life. Hammer's products, knowledge, sharing culture has helped me fulfill a childhood dream."*

despite how much I tried. Slowly and painfully, I began to recoup strength and mobility. The medical staff told me they didn't think I would make it through the first night and managing pain and sleep would be an ongoing battle for the foreseeable future. I also heard "for the next six months, you won't be able to walk nor will you be able to run the same." The doctors and nurses gave me a lot to think about. My understanding of "cause and effect" was certainly sparked when the medical staff told me there was a possibility that I might go to sleep and not wake up. The hours upon hours that I sat in my hospital bed allowed me to think, reflect, and understand that where I am in life at this exact moment is a direct reflection of the choices that I have made.

*Continued on page 59*

*"... just as there will come a day when I can no longer run. But thankfully, today is not that day."*  
- Dean Karnazes



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# Stevia, Xylitol, and Monk Fruit

## The truth about three natural sweeteners

**J**ust when you might get confused, made to believe that anything other than ordinary sugar must be artificial and therefore harmful, here come three plant-derived alternatives that are not only all-natural, but in some instances harbor additional health benefits as well.

Enter stevia, xylitol, and a relatively new player in the Hammer line up of products, monk fruit.

For decades now, we've been educating our readers on how refined simple sugars (anything ending with an "-ose" such as fructose, sucrose, and glucose), provide absolutely no benefits to athletic performance nor overall health.

Here is a brief breakdown of each of these sweeteners, and how we at Hammer incorporate them into many of our products for your benefit.

### STEVIA

This extract (steviosides) is derived from the leaves of *Stevia rebaudiana*, a plant native to subtropical and tropical Central and South America. Stevia's sweet taste, considered to be up to 300 times sweeter than sugar, means that minimal amounts are necessary to sweeten a product.

#### DID YOU KNOW?

Stevia is non-caloric and does not affect blood sugar levels, therefore it is safe for diabetics. Stevia may help to lower elevated blood pressure while not affecting people with normal blood pressure. Like xylitol, stevia does not support acid-producing bacteria responsible for tooth decay.

#### CAN BE FOUND IN

(including but not limited to)

**PERPETUEM®**

**VEGAN PROTEIN BAR**

### XYLITOL

This natural substance that can be found in a variety of fibrous fruits and vegetables is also known as birch sugar, primarily because it is usually extracted/produced from birch trees. (It can also be extracted and produced from corn cobs.)

#### DID YOU KNOW?

The human body naturally produces over 15 grams of xylitol every day by way of normal metabolic processes.

Xylitol also promotes oral health, as it does not ferment and support the acid-producing bacteria that cause tooth decay. That's why you'll find this unique sweetener in gum, toothpaste, and mouthwash, and it's one of the reasons why we include small amounts of it in many Hammer Nutrition fuels.

#### CAN BE FOUND IN

(including but not limited to)

**HEED®**

**RECOVERITE®**

## MONK FRUIT

Monk fruit, is a small round fruit that has been used for centuries in Eastern medicine as a cold and digestive aid, and now it is also being used to sweeten foods and beverages. Monk fruit sweeteners are created by removing the seeds and skin of the fruit, crushing the fruit, and collecting the juice. The sweetness from monk fruit is not due to natural sugars like most fruits, but instead from it's naturally occurring antioxidants called mogrosides. Mogroside compounds therein do not contribute to any calories to our diet.

### DID YOU KNOW?

Research has shown that monk fruit sweeteners do not raise blood sugar levels in humans and may contribute to better glycemic control.

### CAN BE FOUND IN

(including but not limited to)

### ENDUROLYTES® FIZZ

### HAMMER PHOOD



Read more of what we've been saying about sweeteners over the years in *Endurance News* issue #9 and issue #87, as far back as the 1990s—at [hammernutrition.com](http://hammernutrition.com)

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






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-  Cherry Bomb
-  Orange
-  Melon
-  Strawberry



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ADDED  
SUGARS**



# UP

## the POSITIVE benefits of key nutrients



# by putting the sugar DOWN

by STEVE BORN

As if consuming too much sugar isn't risky enough, did you know that high sugar intake reduces absorption of crucial vitamins and minerals? It's true! Interfering with nutrient absorption and causing nutrient depletion could be the root of every deleterious effect sugar has on the body, whether decreased immunity, weakened bones, or diabetes.

### The vitamins and minerals positively affected by curbing a sweet tooth are as follows:

#### VITAMIN C

Unlike most mammals, humans must obtain Vitamin C from outside sources. Researcher Dr. John Ely has demonstrated how high glucose levels inhibit vitamin C from entering our cells, decreasing absorption rates. Further research has shown that individuals who reduce their sugar intake experience significant improvement in vitamin C levels and its benefits.

#### VITAMIN D

High sugar intake increases the production of a devious enzyme which degrades stores of vitamin D. Sugar can also undermine another enzyme necessary to synthesize this critical nutrient. A shortage of vitamin D can lead to a suppressed immune system and numerous health problems,

including certain cancers. Since approximately 75% of people in Western countries are deficient in vitamin D, consuming excess sugar is a huge no-no.

#### MAGNESIUM

High blood sugar and insulin levels associated with excessive sugar intake, both decrease magnesium absorption and cause the kidneys to excrete magnesium faster. Since magnesium is key in stabilizing blood sugar, a vicious cycle commences. As blood sugar regulation is impaired even more magnesium is lost. Cutting out sugar helps ensure that magnesium, critical for a plethora of bodily functions, is absorbed and maintained.

#### CALCIUM

Everyone knows calcium is vital for strong bones among other health benefits. However, because calcium absorption is tied to vitamin D levels, sugar's adverse effects on vitamin D will negatively impact calcium's absorption as well. To make matters worse, excess sugar also increases calcium excretion.

#### CHROMIUM

Chromium, like magnesium, is involved in blood sugar regulation. Depletion of chromium contributes to decreased glucose tolerance, a

precursor to diabetes. Like with magnesium and calcium, high sugar consumption promotes chromium loss, putting you on a fast-track to deficiency. In fact, one study published in the journal *Metabolism: Clinical and Experimental*, showed that consuming a diet consisting of 35% simple sugars increased excretion rates by 300%!

### SUMMARY

The positive effects on key vitamins and minerals by lowering sugar intake, adds to a significant body of evidence that too much sugar is detrimental to athletic performance and overall health.

To maintain optimal health it's imperative to both drastically decrease sugar consumption and ensure you're receiving an adequate supply of vitamins and minerals.

**Ditch the sugary drinks.** They're the largest single source of added sugar in the American diet. Also make a conscious effort to delete other obviously sugar-laden foods such as candy and baked goods.

**Depend on Hammer Nutrition** during your workouts and events. Our fuels contain only complex carbohydrates and no unhelpful simple sugars.

**Use Premium Insurance Caps daily.** Our diets, no matter how good we think they are rarely adequate alone. Given these effects of sugar on specific nutrients, supplementing with our potent multivitamin/mineral capsules becomes absolutely essential.

**Supplement with Essential Mg and Chromemate.** These two Hammer Nutrition products contain optimal amounts of magnesium and chromium, crucial for an array of human health factors.



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to **HELP!***

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since 1987*

# BREAK THE SUGAR CYCLE

Hammer Nutrition has everything you need to stay off the sugar merry-go-round once and for all. Hammer products stand out above all others primarily for what we DON'T put in them, including:

**NO added sugars and  
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to speak with one of our friendly,  
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support you need.

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We have the way.**





# Less pain More gain!



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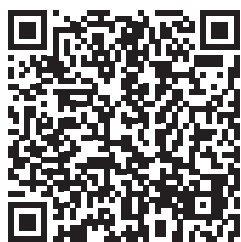
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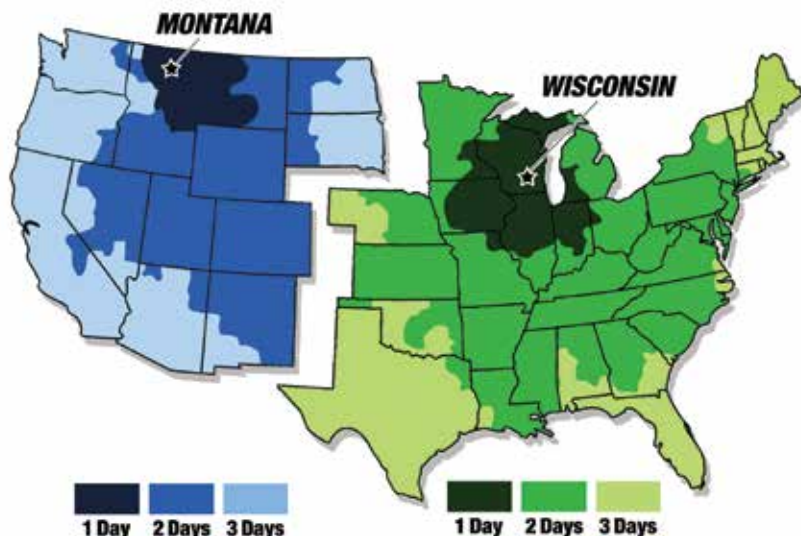
Client # \_\_\_\_\_

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Product	Flavor/Color	Size	Price	Quantity	AMOUNT

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# LIVING PROOF OF PROPER FUELING



Miles racing in the Lake Sammamish Grand Prix in Seattle, WA.

by MILES FRANK

In our neighborhood growing up I probably had the strictest parents when it came to candy, sugar, and everything proclaimed as “junk.” Well actually, make that the whole town, not just our neighborhood.

Camping and cheering on friends and neighbors at triathlons and 24-hour mountain bike races, and of course passing out Endurolytes® and Hammer Gel®, was as much a part of my childhood as scraping my knees skateboarding and learning to swim in the pebbled beaches of glacial lakes. By the time I was about 15, racing got a hold of me. It took a few years for me to realize I had essentially bypassed the “stumbling in the dark” phase of cramps, bonks, over-consumption, and dehydration that plagues many endurance athletes when they get the racing bug and start upping the hours.

Sure, I had the occasional mishap; Trying to ride road bikes on fire roads with too

few calories, or succumbing to extreme heat exhaustion when training in southern California. But practically speaking the normal steps of diagnosis, timing, and prep that ultra racers and outdoor folk alike develop and grow with over time—I more or less skipped all that.

My experience was unique at the dining table as well. Since I had grown up with a different diet than most young adults, when I

started college it only took a few weeks to find a produce stand that stocked seasonal produce grown within a 100 mile radius. Soon that produce stand was a fixture at the end of my training rides, so much so that I would often stuff a sling bag four or five times a week!

Don't get me wrong, it took many years and very kind mentors, especially my father, to understand that bodies vary, but not by as much as most people think. I've been through the process, and now I share my knowledge—primarily by word of mouth and often at the insistence of friends and family. My coworkers and I love helping clients who call the 800 number at Hammer and ask questions. That great care and attention to detail did not happen by accident and in fact is cultivated within our organizational culture. Each and every athlete wants to do more and feel better, and there's nothing better than hearing how our detailed advice helped make the difference. **EN**



Brian with Miles at a Washington State NICA Highschool MTB race.



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# ENDURANCE

## NEWS REMEMBERS

# 1995



### EN #11 The Truth About Fructose

by BRIAN FRANK

When I began sounding the alarm in the 1990s of the dangers and consequences of freely consuming sucrose, fructose, glucose, high fructose corn syrup, and all of the other “ose” yummy sugars, I was roundly criticized and called a “sugar basher” and an “alarmist” using sensationalism to try to promote my products and create differentiation where none actually existed. They argued all carbs are the same, complex, simple doesn’t matter. Boy, were they WRONG!

If there is such a thing, I will gladly wear that title: Brian Frank, Sugar Basher! The truth is that I have always been more concerned with your health, than making a quick buck. Anyone who knows me or has followed my company for more than a few days knows this.

Amazingly, back then RDs and the medical community said high-sugar diets were not a problem, especially for athletes. In fact, they argued it was a preferable fuel source because it would make it easier for your body to break it down into glucose to use for energy! Ha! They said this despite existent research back in the 90s that told of the evils of sugar. Today, most of these “experts” have significantly changed their tunes and now advocate moderation of sugar in one’s diet. However, their voices remain muted or very quiet due to the overwhelming power of the sugar industry.

Unfortunately, the same cannot be said for sports nutrition products in 2021! Sadly, most products are still primarily composed of sugar, salt, and citric acid. Given the irrefutable, and mounting evidence against liberal sugar consumption, they are fighting a losing battle.

To the sugar-based sports drinks,  
I say RIP!



Read the original story  
in *Endurance News* at  
[hammernutrition.com](http://hammernutrition.com)

#### THE TRUTH ABOUT FRUCTOSE

Most people think that fructose is “fruit” sugar, a more healthy alternative to sucrose. While this is true of the sugar found in fresh fruit, the fructose and high fructose corn syrup (HFCS) found in most soft drinks, energy drinks and energy bars is not. It is a highly refined commercial sugar which is neither natural nor good for you. In fact, fructose consumption has been proven to raise blood levels of LDL cholesterol and triglycerides. It has also been linked to the rise in diabetes, heart disease, makes blood cells more prone to clotting, and it may even accelerate the aging process. Not to mention the fact if you are using it during exercise, it is almost certainly affecting your performance adversely.

#### Research Findings

Working with a grant from the International Fructose Association and the General Clinical Research Center grant from the National Institutes of Health, researchers performed a study on high fructose diets versus low fructose diets at the University of Minnesota. The study involved 14 otherwise healthy subjects who consumed

(continued on page 7)



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Endurance News  
Notes on  
fructose  
for  
review





## NEW PRODUCT ALERT!



## MASSIVE BENEFITS FROM THE D<sub>3</sub>/K<sub>2</sub> COMBINATION

by STEVE BORN

The word synergy “refers to when an interaction of elements produces an effect that is greater than the effect that would have resulted from simply adding up the effects of each individual element. In other words, it is what happens when a combination of things produces an effect or result that is said to be ‘greater than the sum of its parts.’”

Vitamins D<sub>3</sub> and K<sub>2</sub>—both essential, fat-soluble nutrients—are a perfect example of synergy. While each of these extraordinarily beneficial vitamins supply many individual benefits, they rely on each other to function optimally, especially in regards to bone and arterial health.

The researched benefits of

vitamin D<sub>3</sub> are so plentiful that it would take every page of all 126 issues of *Endurance News* (and most likely many more than that) to discuss them all (do a Google search on “vitamin D benefits” and you’ll probably be online for a month or so). In fact, there is no other nutrient that I know of—with the exception of magnesium—that is involved in more aspects of human health than vitamin D<sub>3</sub>.

The benefits from **vitamin D<sub>3</sub>** supplementation are to support the immune system,<sup>1</sup> proper utilization of calcium to optimize bone density and overall bone health,<sup>2,3,4</sup> normalize blood pressure and support cardiovascular health,<sup>5</sup> and so much more.

**Vitamin K<sub>2</sub>** works with vitamin D<sub>3</sub> for supporting both

bone and cardiovascular health by activating a protein called osteocalcin, which helps keep calcium out of the arteries<sup>7</sup> while increasing the amount of calcium in the bones (teeth as well).<sup>3</sup> Vitamin K<sub>2</sub>, working alongside vitamin D<sub>3</sub>, also promotes healthy glucose metabolism to maintain proper blood sugar levels,<sup>8</sup> thus helping protect against type 2 diabetes.<sup>9,10</sup>

While these are the primary benefits of vitamins D<sub>3</sub> and K<sub>2</sub>, there are many other benefits, far too many to list here. Everyone\* will benefit from supplementation of vitamin D<sub>3</sub> and vitamin K<sub>2</sub>, the dynamic duo for numerous areas of human health.

\*Vitamin K<sub>2</sub> is not recommended for people on blood-thinning medications, unless approved by their primary health care provider.

### ENDURO-D SOFTGEL CONTENTS

<b>Vitamin D<sub>3</sub></b> .....	50 mcg (2,000IU)
<b>Vitamin K<sub>2</sub></b> .....	1,680 mcg
Menaquinone 4 (MK-4)....	1500 mcg
Menaquinone 7 (MK-7).....	180 mcg

## TWO MAIN FORMS OF VITAMIN D

### D<sub>2</sub> (ergocalciferol)

The plant-derived form.

### D<sub>3</sub> (cholecalciferol)

The sun-derived form, animal-derived (lanolin) form, and the form that is believed to effectively raise bodily levels of active vitamin D better than D<sub>2</sub>.

NOTE: In 1919, German researcher Adolf Windaus discovered three forms of vitamin D: D<sub>1</sub>, D<sub>2</sub>, and D<sub>3</sub>. When it was found that D<sub>1</sub> was actually a mixture of compounds instead of a pure vitamin D product, the term D<sub>1</sub> was dropped.

## TWO MAIN FORMS OF VITAMIN K

### K<sub>1</sub> (phyloquinone)

The plant-derived form, and the main form of vitamin K in the diet. Vitamin K<sub>1</sub> is poorly absorbed, with less than 10% absorption rates.

### K<sub>2</sub> (Menaquinone)

The often found in foods that contain fat and suggested to be a better-absorbed form than K<sub>1</sub> that also circulates in the blood longer than K<sub>1</sub>.

NOTE: Vitamin K<sub>2</sub> has a number of menaquinone (MK for short) subtypes, with the most beneficial ones being MK-4, and MK-7. Research on the MK-4 subtype of vitamin K<sub>2</sub> used 1500 mcg/day.<sup>11</sup>

Studies on MK-7 used 180 mcg/day.<sup>12</sup> Also, Dr. Dennis Goodman, author of *Vitamin K<sub>2</sub>: The Missing Nutrient for Heart and Bone Health*, suggests amounts between 150 to 180 mcg/day of MK-7. These are the amounts found in EnDuro D.

References available upon request

# Superior Vitamin D3 + K2 Formula

- Superior bone health combination
- Offers powerful immune support
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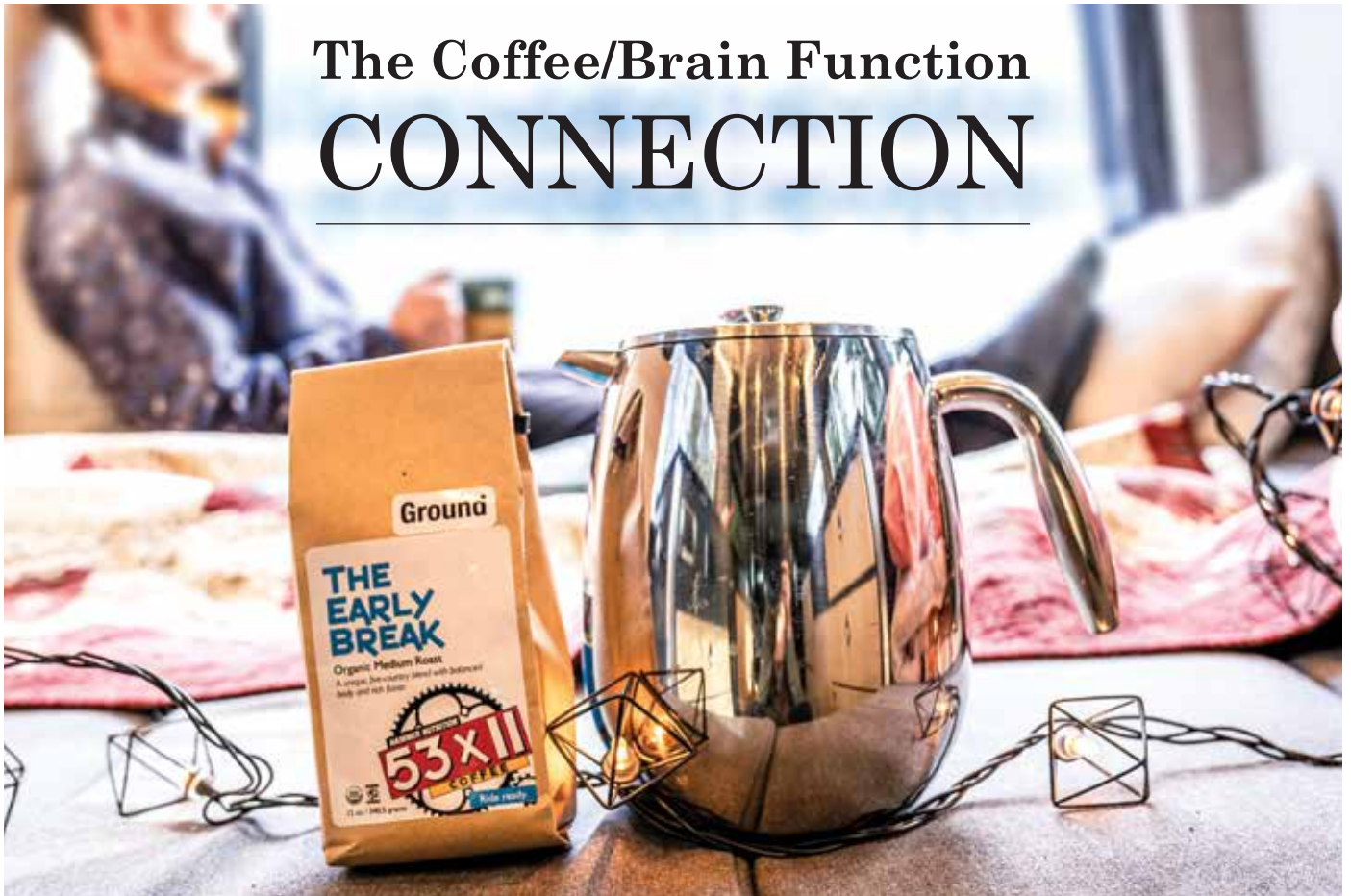


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# The Coffee/Brain Function CONNECTION



**(HINT: IT'S ALL GOOD!)**

by STEVE BORN

A study published earlier this year in *Molecular Psychiatry*<sup>1</sup> shows that regular coffee consumption imparts a number of benefits for brain function.

Using functional magnetic resonance imaging (fMRI), a technique for measuring and mapping brain activity, researchers created two groups based on their coffee drinking habits:

## 1. COFFEE DRINKERS

Those who drank a minimum of ½ cup of coffee per day

## 2. NON-COFFEE DRINKERS

Those who had less than 1 cup of coffee per week

Structured interviews also confirmed the participants' coffee consumption habits. All participants were instructed to abstain from caffeinated products for three hours before the fMRI and assessment of the findings.

The researchers found that, compared to non-coffee drinkers, those with who drank coffee on a regular basis experienced:

- Enhanced concentration
- Improved motor control, the regulation of movement in the nervous system.
- Greater alertness and ability to focus

Research and senior author, Nuno Sousa, states

*"The take-home message... is that the regular intake of coffee, by reducing the*

*connectivity of particular brain networks at risk, may be of relevance for attention/alertness, with possible implications in learning and memory, and also for motor control."*

Coffee is clearly the most popular beverage in the world. Data from 2008 shows that more than 400 billion cups consumed each year, with 450 million cups of that total being consumed in the United States every day. If you're not yet a coffee lover, this is one more of the many benefits regular coffee drinkers enjoy. EN

## REFERENCE:

[1] Magalhães, R., Picó-Pérez, M., Esteves, M. et al. Habitual coffee drinkers display a distinct pattern of brain functional connectivity. *Mol Psychiatry* (2021). <https://doi.org/10.1038/s41380-021-01075-4>

Photo: Drew Silvers



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Chris Lutz stops for espresso during the Hammer-sponsored Heartland of Florida Cycling Camp. Photo: MomenTaker Photography

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All 53x11 Coffee Blends are available in 12 oz. Ground and Whole Bean bags.

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## Balsamic Crock Pot Chicken

### INGREDIENTS

Chicken pieces (thighs and/or breasts)  
Olive oil  
Chopped fresh garlic to taste  
Balsamic vinegar

### PREPARATION

Pour 1/8 inch of olive oil into crock pot. Arrange chicken and sprinkle with garlic, salt, and pepper. Pour Balsamic vinegar over and set on high for 2-3 hours. Serve and enjoy.

## Farm to Table Fresh



## Garlic Green Beans

### INGREDIENTS

1 lb. green beans  
1 Tbsp parsley, chopped  
1 Tbsp butter or olive oil  
1 garlic clove, minced  
or 1/2 tsp garlic powder

### PREPARATION

Wash the green beans and trim off the stem ends. Heat steamer, and when the water is boiling, put the beans in. Steam for about 5 to 6 minutes. The cooking time will vary depending on your taste; I like my beans very green and crunchy. Remove beans, toss in a bowl with the remaining ingredients, and serve.



# Deliciously Healthy Recipes

## Greek Quinoa Stuffed Peppers

### INGREDIENTS

3-4 cups water or vegetable broth  
1 1/2 cups quinoa, uncooked  
1/4 cup apple cider vinegar  
2 cloves garlic, minced  
Juice from one lemon  
3 Tbsp olive oil  
1/2 cup Kalamata olives,  
sliced if desired  
1/3 cup fresh parsley, chopped  
1/3 cup fresh cilantro, chopped  
1 red onion, diced  
1 cup cherry tomatoes, sliced in half  
1/2 cup chopped artichoke hearts  
(optional)  
Salt and pepper to taste  
1/2 cup crumbled feta cheese

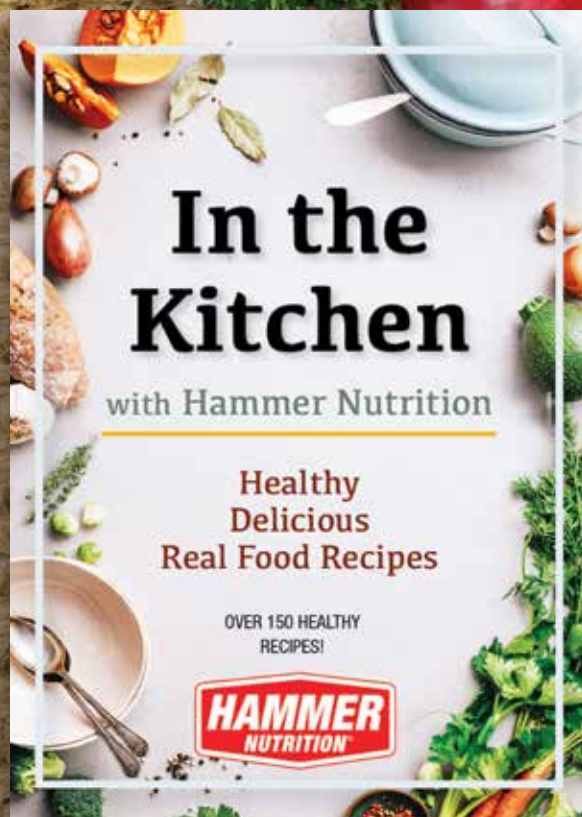
### PREPARATION

In a medium saucepan, cook quinoa in vegetable broth for 15-20 minutes until tender, stirring occasionally. Allow to cool. In a small bowl, whisk together the vinegar, garlic, lemon juice, and olive oil. Gently toss the quinoa together with the remaining ingredients, except feta. Pour the olive oil mixture over the quinoa. Add more salt and pepper to taste and gently stir in the feta cheese.

Cut tops or sides off peppers, fill with Greek quinoa mixture, and bake at 375°F for 20-30 minutes. The remainder of the filling can be served later as a side dish.

Looking for more  
healthy recipes?

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**FREE** copy today!





# TAKING STOCK

## Better Health Starts In Your Kitchen

by MILES FRANK



If you've put off cleaning up your diet and don't know where to start, this guide will help you stock your kitchen with delicious and healthy foods, as well as the basic tools for preparing them. Your healthier new diet will be rich in whole foods and contain little or none of the gluten, dairy, sugar, and salt that can hurt your health and performance.

Working and training full time can leave little room in the schedule to prepare three meals a day. The method that works for me is to make the time that is spent in the kitchen count, by cooking at least one grain,

one protein, and one vegetable in advance for the next 2 to 3 days. The grain and protein will keep in the fridge for a few days, while the vegetables should be consumed within 24 hours or so. This saves time and energy while maximizing the benefits of nutritious, home-cooked food.

I designate two days a week as my cooking days to prepare multiple servings of a base protein and a base starch. On these days, I might spend two to three hours planning, shopping, preparing, and cooking, but it frees up lots of time during the rest of the week. Here's what a typical cooking day is like.

### Proteins

Two to four medium chicken breasts, an 8 oz. piece of fish, 1 pound of beef, or turkey burgers usually last me until my next cooking day. After planning and shopping, I marinate the meats in a 2-gallon sealable bag, which then goes in the refrigerator. As a 155-lb. cyclist, I consume 0.75–1.5 grams of protein per pound of my body weight per day (that's 116–232 g/day or about 4–8 oz/day) by eating high quality protein snacks and meals throughout the day and Hammer Whey protein nightly. You can add a can of drained tuna to a salad for additional protein, too.

## Starches

As the meats marinate, I prepare two different starches (brown rice, quinoa, or potatoes) to last until my next designated cooking day. For most people, six to ten servings of starch are enough for half a week, depending on body size and training volume.

I usually choose a cooking method that leaves the starch “plain,” e.g., baked potatoes, quinoa pasta tossed lightly with olive oil, or plain steamed rice. The foods keep better this way than with a heavy sauce. Depending on the starch, cooking takes 20 minutes to 1 hour. Quinoa and rice are great for any meal, either as porridge in the morning or as a side dish at lunch and dinner. After the starches have cooked and the meats have marinated for 1–2 hours, I cook the meats simply by grilling, baking, or broiling them.

## Veggies

Once you’ve prepared and refrigerated these staple proteins and starches, meals come together fast, usually in 10 minutes or less. Simply add lightly steamed, grilled, or sautéed veggies (like broccoli, asparagus, green beans, or kale) or fresh raw greens, carrots, or other produce.

Your meals will be far healthier and tastier than any take-out or processed packaged meal would be. And instead of spending hours daily in your kitchen, you can spend those hours training, racing, or whatever you most like to do. **EN**

For a full list of essential equipment and food for your kitchen, see **page 58**.

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- Supports vascular health
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Vietnam



## HAMMER-SPONSORED TRAIL RACES IN THE MOUNTAINS OF MỘC CHÂU

Postponed from the original date in January, the Mộc Châu Vietnam Trail Marathon is the jewel of the Vietnam Trail Series - coming up in late August.

Supported by Hammer Nutrition Vietnam for yet another year, they will have **HEED®** on course and a full booth of product at the event expo as well.

Multiple Hammer Vietnam ambassadors will compete for the win in the 70K trail race, including Quang Tran, Romain Berion, and Claire Josquin.

Thank you again to Tim & Subayda at Hammer Nutrition Vietnam for supporting the Vietnam Trail Series!

Photo: Topas Explorer Group

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Hungary



## PÉTER SZILÁGYI QUALIFIES FOR IRONMAN WORLD CHAMPIONSHIPS

Triathlete Péter Szilágyi has qualified just last month as the only Hungarian male for this year's IRONMAN World Championships in Kona, Hawaii.

Hailing from the county of Budapest, Peter has raced long distance triathlons since 2015. He relies on **Perptuem®**, **Fully Charged**, **Anti-Fatigue Caps**, and **Endurolytes®** for long course racing.

*"In 2020, there were not many IRONMAN races, so as soon as I finally faced one I knew I could manage a good result. I want to fight like a 'cheetah' because I know everyone goes to Kona with all they've got!" - Péter*

Photo: Kiraly Fotografus



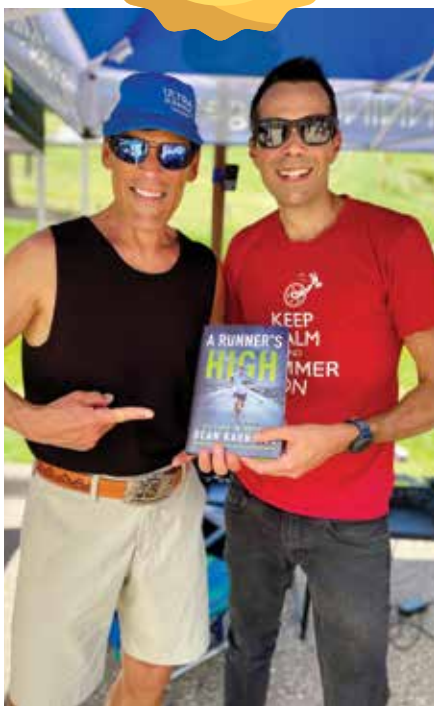




# FROM OUR ATHLETES

Hammer Nutrition fuels athletes at every level, ranging from elite pros to beginners competing in their very first race. This is just a small cross section of the thousands of Hammer athletes around the world who are establishing Hammer's reputation for having safe, natural, and performance-proven results. Congratulations to everyone on their accomplishments!

**SILVER  
BUCKLE**  
23:47:33



## Zandy Mangold

**Silver Buckle (sub-24 hour) Finish**

Western States 100

Hammer athlete Zandy met up with Dean Karnazes at the Western States 100 to grab his new book. Zandy finished the 100-mile trail run in a stellar sub-24 hour time, with his trusty supply of Endurolytes®, Nocchiola Hammer Gel®, and Orange-Vanilla Perpetuem® powering him through the race.

**1st**



## Jen Reschke

**1st Place Female**

Parker Dam Gravel Grinder - 82M Open

Parker Dam was a testament to being patient and staying steady...I rode most of the 82 miles by myself. Fueling was mostly Tropical Hammer Gel®, HEED® Cherry Bomb flavor, and Endurolytes® Extreme, and Endurance BCAA+ every hour or so. I knew I was in 2<sup>nd</sup> place and finally caught 1<sup>st</sup> place with 13 miles to go on the last long climb. I powered past her and tried to keep steady—and I ended up winning overall female by 4 minutes!

Photo: Neil Gallivan

**1st**



## Ron Vaillancourt

**1st Place Age Group**

Indian Mud Run

"Got a new medal! What an event—the Indian Mud Run in Coshocton, OH was a hot and steamy race with 3000ft+ of climbing and a great atmosphere all around. Thank you Hammer Nutrition for my race day nutrition which included Sustained Energy, Race Caps, Anti-Fatigue Caps, Endurolytes® Extreme, Fizz, and Recoverite® to finish it off!" - Ron

Photo: Naomi Girouard



## Rj Cook

1<sup>st</sup> Place 4-Man Elite Team

Perry Mountain 24-hour Challenge

Rj took the podium with his team in Maplesville, AL. When racing Enduros like these, Rj relies on HEED, Fully Charged, and Hammer CBD plus CBD Balm to recover from the roots and ruts of off-road racing.

Photo: Tina Carter Smith



## Victor Sheldon

1<sup>st</sup> Place Age Group

Team Big Bear Finals

Third fastest time for all categories, fueled by HEED® Cherry Bomb flavor, Fully Charged, and Lemon Lime Endurolytes® Fizz.

Photo: Gabe Keating



### RACE RECIPE

# DENNY ROWE III

Sasquatch Duro



*"I consumed the solid food first and tried to empty the light HEED bottle before the bottle drop. I'll occasionally take a pull from the strong HEED. After I grab the fresh bottle, I switch to Hammer Gel (washed down with light HEED) and the strong HEED bottle to carry me through to the finish... Thank you Hammer for keeping the fire rolling all the way to the line!" - Denny*

Denny's 2<sup>nd</sup> place win was quickly followed by another win at Takelma Gravel Grinder, setting a course record!

Photo: Harry Apelbaum

### FUELING RECIPE

#### PRE-EVENT

Race Caps Supreme, Mito Caps, Endurance BCAA+, and Chocolate Hammer Gel®

#### DURING

Bottle #1: 1 scoop Strawberry HEED®

Bottle #2: 4 scoops HEED Cherry Bomb

Bottle #3: 1 scoop Strawberry HEED

Plus Chocolate Hammer Gel and Hammer Bars®

#### RECOVERY

Race Caps Supreme, Mito Caps, Endurance BCAA+, and Chocolate Vegan Recoverite®

### RESULTS

2<sup>nd</sup> Place Overall





Photo: Steve Swope Photography

Hammer Athlete

# Castroneves Wins Indianapolis 500



# 4 x 4 x 4

- 4th Indy WIN
- 4th Driver to Win 4 Times
- 4th Oldest Winner

## Congratulations Hélio!

Hammer athlete, Hélio Castroneves of Brazil raced his way into the Indianapolis 500's most exclusive club recently, winning the Indy 500 for the fourth time!

Castroneves, at 46 years old (the fourth-oldest Indy winner), joins Rick Mears, A.J. Foyt, and Al Unser as a record-tying four-time winner. With proper fueling and preparation, Castroneves displayed energy to spare by all but toying with the competition in the final laps to overtake Alex Palou for a dramatic and historic finish. Hélio achieved amazing success prior to being introduced to him by our mutual friend Bryan Cowell in 2019. We are honored to be helping him extend his career at the top level of motorsports.



Hélio's pre-Indy order arrived just in time! Photo: Bryan Cowell

## Hélio's winning secret?

### Chocolate flavored Hammer products!

#### HÉLIO'S FAVORITE PRODUCTS FOR TRAINING

Chocolate Perpetuem®  
Chocolate Recoverite®  
Chocolate Whey Protein  
Chocolate Hammer Bars®  
Nocciola Hammer Gel®  
Cola Endurolytes® Fizz

#### BEHIND THE WHEEL

Huckleberry & Tropical Hammer Gel  
Endurolytes Extreme Powder  
Fully Charged



Hélio getting ready for the start of Petit Le Mans 10-hour endurance race in Atlanta, GA. Photo: Bryan Cowell





# ENDURANCE NEWS **WEEKLY**

Since 1993, *Endurance News* has been a leading source of vital information for endurance athletes. Every issue is rich with insightful articles to help you be healthier, fitter, and faster. Between issues, we offer great new articles online every week to keep your knowledge growing!

## Meet the Authors

**Brian Frank**



Brian's uncompromising commitment to providing superlative customer service, unlimited free educational resources, and the highest quality, all-natural products specifically engineered for endurance athletes has allowed him to achieve his goal: helping serious endurance athletes reach their highest level of performance and health, safely and naturally.

**Steve Born**



Steve has over 20 years of independent research in nutritional fueling and supplementation, which has given him unmatched familiarity with the myriad of product choices available to athletes—and the knowledge of what actually works.

**Dean Karnazes**



Also known as the Ultramarathon Man, Dean Karnazes is a supremely accomplished runner, author, and speaker. His passion for helping athletes achieve their personal best in sport and life aligns with Hammer's fueling- and education-based philosophy. Dean's legendary accomplishments have been Hammer-fueled since 2008.

**Dr. Bayne French MD DC**



Dr. Bayne French M.D. D.C. is Hammer Nutrition's medical advisor. Along with an MD from the University of Washington, Dr. French brings over 20 years of health experience, with a focus on wellness, to the Hammer team. Dr. French currently works at Glacier Medical Associates and is double board certified in Family Medicine and Obesity Medicine.

# Stay Healthy. Stay Informed.

## ENW: READ MORE...



### SODIUM WAR IS OVER!

By: Brian Frank

June 23, 2021

[READ MORE](#)



### BREAKING NEWS! HAMMER CBD PASSES ALL DRUG TESTS

By: BRIAN FRANK

June 16, 2021

[READ MORE](#)



### THE MIRACLE NUTRIENT

By: Brian Frank & Steve Born

June 8, 2021

[READ MORE](#)



### ANOTHER SCOOP ON SUGAR

By: Dr. Bayne French M.D. D.C.

June 2, 2021

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### SHIMANO / IMBA STORY

By: Miles Frank

May 19, 2021

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### 5 REASONS YOU NEED PERPETUEM®

By: Miles Frank

May 12, 2021

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### WHY EAT JUNK FOOD DISGUISED AS NUTRITION BARS?

By: BRIAN FRANK

April 28, 2021

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### NOT ALL ELECTROLYTE CAPSULES ARE CREATED EQUAL

By: Dean Karnazes

April 21, 2021

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### 5 WAYS TO CLEAN UP YOUR ROUTINE FOR SPRINGTIME

By: Miles Frank

April 13, 2021

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## ENDURANCE NEWS WEEKLY



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***These events are fully sponsored by Hammer: no sugar at the aid stations, no junk fuel, only the best ingredients to help you fuel right and feel great throughout the entire event!***

#### IT HAS BEEN AN EPIC YEAR FOR EVENTS SPONSORED BY HAMMER NUTRITION

With so many great events to choose from, it's always hard to decide which ones have room enough to feature in *Endurance News*. For this issue, we selected some pretty epic and iconic events, some that we've been supporting for years and years, and some that are now on board with Hammer Nutrition for the first time.

Our long-time relationship with our older events clearly shows that they rely on Hammer Nutrition year after year to ensure the success of their participants. The newer events—and we only had room in this issue for a couple “biggest of the big” events—have now become official Hammer Nutrition events, which will be the first time many of the participants will become introduced to, and benefited by, Hammer Nutrition's superior line of “no sugar or other junk ingredients” fuels. **EN**



Find the Hammer Aid Station at your next event, like this one from CMMX in Montana. Photo: Jason Steffins



### Horribly Hilly Hundreds

8.28.2021 • Blue Mounds, WI

[horriblyhilly.com](http://horriblyhilly.com)

Approximately 1,800 riders are going to be toeing the line and ready for LOTS of climbing in this epic “not to be missed by serious cyclists anywhere” event. And with nearly 11,000 feet of elevation gain in the 200K, it's no wonder it's referred to as “The Toughest One-Day Challenge Ride in the Midwest.”



### Golden Gran Fondo

8.29.2021 • Golden, CO

[granfondonationalseries.com/gran-fondo-golden](http://granfondonationalseries.com/gran-fondo-golden)

The sixth race on the schedule of the prestigious Colnago Gran Fondo National Series events. All distances in the Golden Gran Fondo feature more elevation gain per mile than any other event in the eight-race series, all between 5,600-11,000 feet above sea level.

***At Hammer Nutrition we've been sponsoring 2,000 events annually for over thirty years. We are experts in event support and fully understand that quality events require quality fuels.***



## Dakota Five-0

9.5.2021 • Spearfish, SD

[dakotafiveo.com](http://dakotafiveo.com)

Now in its 20<sup>th</sup> year, 800 riders are planning to race, all hoping they pass the races recommendations: If you are not fit, have health issues, or are not an avid/advanced rider of technical singletrack, I would suggest you try another race.



## Ice Age Trail 50

9.11.2021 • La Grange, WI

[iceagetrail50.com](http://iceagetrail50.com)

One of the oldest continuously-running ultras in the country. A course like no other, you'll run in dense deciduous forests, under tall pines, over rocky ridges, and across open prairies—and see lakes, kettles, kames, erratics, and other natural features left when the glaciers finally retreated from Wisconsin more than 10,000 years ago.



**NEW EVENT FOR HAMMER!**

## LoToJa Classic

9.11.2021 • Logan, UT

[lotoja.com](http://lotoja.com)

At 200+ miles, LoToJa—which starts in Logan, UT and finishes at the base of Jackson Hole Mountain Resort in Teton Village, WY—is the longest one-day USAC-sanctioned bicycle race in the country. Now in its 39<sup>th</sup> year, LoToJo welcomes Hammer Nutrition as its official nutrition sponsor. That's great news for all the riders, as they will no doubt enjoy better performances using our premium-quality, no-simple sugar fuels.



**NEW EVENT FOR HAMMER!**

## Tour of the Gila

9.29.2021–10.3.2021 • Silver City, NM

[tourofthegila.com](http://tourofthegila.com)

For the first time since its inception in 1987, and over the course of five difficult stages, some of the best national and international riders will finally get to enjoy the pure, clean, high-quality, long-lasting energy they'll get from Hammer Nutrition fuels.



**A RENEW FOR HAMMER!**

For the remainder of 2021 and all of 2022, we are absolutely psyched to be reunited with Todd Sadow and his phenomenal Epic Rides events, including the hugely popular 24 Hours in the Old Pueblo (February 18–20, 2022). Thousands of riders have been attending Epic Rides events for many years and we're certain they'll be extremely pleased knowing that the premium-quality Hammer Nutrition fuels will once again be there!

Upcoming Epic Rides events:

## Tour of the White Mountains

10.2.2021 • Pinetop-Lakeside

[epicrides.com](http://epicrides.com)

At 7,000 feet, a limited field of riders will discover the challenges and gratification from riding awesome singletrack among a pine forest backdrop while witnessing the endless beauty (and perfect distraction) of the fall season in the Apache-Sitgreaves National Forests.

## OZ Trails Off-Road

10.15.2021–10.17.2021 • Bentonville, AR

[epicrides.com](http://epicrides.com)

All participants will enjoy a neutral rollout from downtown Bentonville into the foothills of the Ozark mountains. Once they've entered the shade cast by the forest's expansive pine tree canopy, participants will connect with a selection of the finest Northwest Arkansas (NWA) singletrack, occasional doubletrack, and paved segments.



# CONTINUED ARTICLES

## Fishy Research

by STEVE BORN

*Continued from page 15*



...that all regular fish oil supplements (i.e., EPA-only supplements) will have higher amounts of EPA than DHA. This includes Hammer Nutrition's

**EndurOmega** supplement.

Another interesting (and odd) thing to note is that the researchers recommend eating fish—which has both EPA and DHA in it—but that it's not recommended to take supplements that naturally contain mostly EPA and smaller levels of DHA.

A tremendous body of research clearly shows the benefits that an EPA/DHA combination provides, in both dietary consumption of fish and via **EndurOmega**, a highly purified fish oil supplement. We believe that this research, which emphasizes a purified EPA-only supplement may represent more of a commercial bias than that which is revealed through a long history of scientific investigation.

**EN** References available upon request

## Taking Stock

by MILES FRANK *Continued from page 46*

### FILL YOUR FRIDGE AND CUPBOARDS WITH THESE ESSENTIALS

#### NECESSARY EQUIPMENT

- Glass baking dishes (9" square & 9"x13")
- Knives (paring, serrated, 6" butcher)
- Mason jars to store leftovers, sauces, etc.
- Measuring cups
- Mixing bowl
- Sauce pan
- Sauté pan
- Soup pots
- Stirring spoons
- Strainer

#### ALSO USEFUL

(for more complicated recipes and cooking from scratch)

- Baking sheet
- Blender or food processor
- Muffin tin
- Waffle iron

#### GOOD FOODS TO KEEP ON HAND (very high nutrient/cost ratio)

- Bananas
- Canned Tuna
- Chickpeas (canned or dried)

#### REFRIGERATED FOODS (opt for produce that is in-season, rotate to eat a wide variety)

##### Proteins

- Chicken (natural, free range if possible)
- Deli-meat (turkey, chicken, uncured ham)
- Eggs (brown, cage free, organic)
- Fish (wild varieties)
- Lean red meat (grass-fed beef, buffalo, venison)
- Sliced/block cheese (small amounts, occasionally)
- Turkey

##### Veggies (2-3 at a time to keep fresh)

- Asparagus
- Beets (with the greens!)
- Broccoli (with stems)
- Carrots
- Cauliflower
- Cucumber
- Eggplant
- Green beans
- Kale
- Snow peas
- Spinach
- Squash (butternut, spaghetti, and other winter types)
- Zucchini

##### Fruits (2-3 at a time to keep fresh)

- Apples
- Blackberries
- Blueberries
- Cherries
- Grapes
- Mangoes
- Oranges
- Peaches
- Pears
- Pineapple
- Plums
- Raspberries
- Strawberries

##### Additional cooking necessities

- Celery
- Garlic
- Lemons
- Limes
- Onions (green, red, yellow)
- Fresh herbs (basil, cilantro, dill, ginger, mint, Italian parsley)

#### **EN** IN THE KITCHEN

Find more delicious and nutritious recipes on page 44.

# Cause & Effect

by LUIS REYES

*Continued from page 29*

I created the opportunity that allowed this incident to occur, but I have never created opportunities to accomplish my personal goals. I recalled all that I had let go throughout the years, until I remembered the ultramarathon goal I had set as a child. It prompted me to re-read *Run* by Dean Karnazes and in there he fittingly says "...just as there will come a day when I can no longer run. But thankfully, today is not that day." Again, but now as an adult, not to be ridiculed I solemnly vowed I would accomplish my childhood goal.

As I pondered an approach to implementing my newfound cause-and-effect epiphany, I realized I needed to take responsibility for my life and put in the necessary work to accomplish my dreams. I was so determined to start ultratraining, I used my IV stand to hold myself up and pace around the hospital bed, forcing my body to relearn the simple mechanics of walking. At first, it was only seconds but eventually I built up to minutes, and of course, I counted it as "time-on-feet" training. The medical staff would stop me, get me back in bed and stress the importance of recovery. I didn't argue and understood they were doing their job, but I didn't listen. Searching for advice and motivation in books, magazines, and from local athletes, I signed up for my first ultramarathon, Trail Racing Over Texas: Brazos Bend 50K, from my hospital bed to run eight months later.

At this event I was introduced

to Hammer Nutrition. At the time, my longest run was a half marathon so I naturally approached my first ultra in the same manner. I started the race guns blazing, without a pace, and without considering either nutrition or hydration. The conditions in SE Texas are hot and humid, and consequently halfway through the race, I started cramping and needed serious help. As I reached an aid station, completely deficient of electrolytes and in serious need of high-quality calories, a Hammer Nutrition fueling expert directed me to the products in the middle of the table. I tore open a **Hammer Gel®**, and washed it down with a water bottle full of **HEED®**. Within minutes I was completely recovered from my near-bonk experience and jogged away from the aid station feeling revitalized. With cramps completely eliminated, I experienced a second wind of energy. This was my first encounter with endurance nutrition and I was immediately fascinated with how Hammer helped me to my first ultramarathon finish.

Hammer Nutrition products and fueling protocols have been a support staple in my running kit through every ultra finish ever since. Over the years, I have refined my nutrition regimen with the guidance of Hammer's literature and professional staff. No longer do I carbo-load, bonk, cramp, or crash. At 180 calories per hour, **HEED®** and **Hammer Gels®** are the core products that sustain my energy levels (augmented with **Pertpetuem® Solids**). **Endurolytes® Extreme** capsules allow my body to carry out critical functions necessary for running. I've

also turned to Hammer for my daily vitamin intake, with **Race Caps Supreme** leading the way. **Recoverite®** paired with **Tissue Rejuvenator** optimizes my recovery periods and I enjoy periodically reevaluating my supplement plan with Hammer's knowledgeable staff. As G.I. Joe taught us in the 80s, "knowing is half the battle."

In 2018, I had the opportunity to visit Hammer Headquarters while visiting my home state. My relationship with Hammer has strengthened over the years and in turn, has made an enormously positive impact on my life. My physical and mental growth as an athlete has been exponential since discovering Hammer, as they have given me the tools and confidence to continue competing in the sport that saved my life. Hammer's products, knowledge, sharing culture, and sponsorship have helped me repeatedly accomplish and fulfill a childhood dream. The gift of running that I nearly lost is the same gift that has made me the person I am today. With the support of Hammer Nutrition, I have restructured a positive role model for my children and Native American communities, and I am a proud Ambassador for the organization that put on my first ultramarathon, Trail Racing Over Texas. Thank you Hammer, let's get ready for the next one! **EN**

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**ENDURANCE NEWS WEEKLY**



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# BIG SUGAR'S LIES SACRIFICE LIVES

by STEVE BORN

In *Endurance News* #108 (2018) we first wrote about Project 259, a study buried by the sugar industry (“Big Sugar”) that appeared to show a link with sucrose and heart disease and bladder cancer (“Sugargate”). In an earlier issue, we reported that the Sugar Research Foundation had paid off three Harvard scientists to make sugar seem less unhealthy and instead put the blame on fat.

## EN SUGARGATE

Read more about the sugar industry on page 12.

Even though some of these events go back 50+ years, we’re still fuming over them—and you should be as well. Why? Because far too many people put their faith in the blatantly false conclusions provided by Harvard nutritional scientists, conclusions bought and paid for by the sugar industry to deemphasized the harmful effects of their product. People were led to believe that, aside from lacking nutrients, sugar was a basically benign substance, which undoubtedly encouraged them to think that it was okay to eat sugar-laden foods.



# “Sugar is not a harmless, benign substance; it’s simply not good for your health or athletic performance and it never will be.”

One of the Harvard researchers, the now-deceased Dr. Frederick J. Stare, bolstered the idea that sugar was a harmless substance, by including recommendations<sup>1</sup> like:

- Sugar is “a quick energy food...put a teaspoon in [your] coffee or tea three or four times a day”
- Coca-Cola is “a healthy between-meals snack”
- All Americans should drink a cup of corn oil a day
- “Eat your [food] additives. They're good for you”
- “We get as much food value from refined foods that have been enriched as from natural foods, and sometimes more”

Combined with relentless promotion that sugar wasn't the cause of health issues, one has to wonder how many people unnecessarily succumbed to sugar-related disease and death. Of course, we can't blame Dr. Stare for all of the deaths resulting from excess sugar consumption, but the statistics are staggering and disturbing: In 2006, **deaths from coronary heart disease, diabetes, and stroke specifically caused by elevated blood glucose was estimated to be approximately 3.2 million annually.**<sup>2</sup>

Sadly, the deceptive practices and influences of the sugar industry are still happening. A paper was published in PLOS Medicine revealing the sugar industry's influence on the National Institute of Dental Research (NIDR). In 1971, the NIDR launched a program called the National Caries Program (NCP) that was designed to eradicate tooth decay within a decade. As it turned out, **research that could have been harmful to sugar industry interests was omitted from priorities identified at the launch of the program.** Instead of exploring the benefits of less sugar consumption, the focus shifted to other more costly and less plausible possibilities, including finding a vaccine for tooth decay.


In their conclusions, the authors wrote:

*“The NCP was a missed opportunity to develop a scientific understanding of how to restrict sugar consumption to prevent tooth decay. A key factor was the alignment of research agendas between the NIDR and the sugar industry. This historical example illustrates how industry protects itself from potentially damaging research, which can inform policy makers today.”*

## SUMMARY

The accumulation of over 50 years of research has clearly shown that sugar is a major risk factor for coronary heart disease. Unfortunately, that information has been suppressed by the sugar industry. Sadly, the practice continues to this day. Referring to Project 259, nutritional expert, Marion Nestle, wrote:

*“This 50-year-old incident may seem like ancient history, but it is quite relevant, not least because it answers some questions germane to our current era. Is it really true that food companies deliberately set out to manipulate research in their favor? Yes, it is, and the practice continues.”*

Sugar is not a harmless, benign substance; it's simply not good for your health or athletic performance and it never will be. Big Sugar will tell you otherwise, but don't be swayed by their deceptive claims. **Excess sugar intake is a major factor in heart disease, the number one killer of Americans, as well as several cancers, Alzheimer's disease, and more.** Don't be a victim. Don't be a statistic. 

References available upon request

## READ MORE ON ENW

“Medical Ethics of the Sugar Industry”





# Sodium War

by Brian Frank

*Continued from page 22*

## TESTING SODIUM CONCENTRATION WITH ENDURANCE RACERS

Enter the Wayne Taylor Racing IMSA team which competes at the highest level of endurance racing in the United States in events such as Rolex 24 Hours of Daytona, 12 hours of Sebring, and the 10-hour Petit Lemans event. Being the most innovative and forward-thinking team in the paddock, they have a driver science program. It took a racecar team with big budgets and lots of technology to open the door for us to address our position with scientific data. In their pursuit of victory, nothing is left to chance, everything is examined under a microscope to remove any variable or weakness that may make them less competitive. Which is why WTR has had a formal Driver Science program in place since 2016. Part of the program uses patented technology a company called CoreSyte. According to their web site, “CoreSyte designs, develops, and manufactures real-time, non-invasive digital sweat patches which measure total fluid loss, sodium loss, and potassium loss for an athlete.” You can read further about this technology and company on their website.

This finally gave us the opportunity to gather empirical data to verify what we have been seeing anecdotally with athletes for decades. One of their drivers, Ricky Taylor, is an extremely gifted athlete and race car driver. However, when I met him in 2019, he was having severe difficulty with the heat

stress situation during these endurance races. Primarily, suffering excessive fluid and electrolyte losses.

As is the case with all athletes I assist, Ricky and I spoke for a long while and I asked him quite a lot of questions about his diet, training, and hydration practices to understand exactly what information he was pivoting from and his mindset. Once I explained everything to Ricky in great detail, he was fully committed to my idea of rebuilding his diet without excessive sodium and sugar. After all, the high sodium approach he had been following up until now then was certainly not working.

As Ricky will concur, it took him several months and much dedication to learn, practice, and enjoy this new way of eating. However, the results he began noticing within a short period of time provided him the necessary encouragement and reinforcement to continue with his new diet.

In addition to anecdotal feedback, we had the opportunity to use CoreSyte’s technology that allowed us to measure the sodium concentration in his perspiration. This was coupled with a somewhat low-tech method of measuring and tracking his pre-and post-driving stint body weights: getting on a scale wearing just underwear (their driving suit

and helmet absorb most of the water being lost). Since they had already begun accumulating this data prior to introducing any Hammer products or diet modification, we had baseline data. This allowed us to measure the change in his fluid loss and sodium concentration in his perspiration after over a year of using Hammer products and consuming a low sodium diet.

Shortly after winning the 24 Hours of Daytona in January 2021 the results were in: fluid loss was reduced up to 25%, while sodium losses were reduced up to 40%!

Specifically, Ricky recorded a 20-25% reduction in fluid loss, and a 33-40% reduction in sodium concentration in his perspiration! The reason for the range in numbers is due to the continuous monitoring and accumulation of data over a period of hours in the car.

## CONCLUSION

This is not small or insignificant by any means and affirms what we have been saying for decades: You can and will improve your ability to withstand heat and humidity during endurance exercise by reducing your daily sodium intake! Consider all the health benefits of a low sodium diet to be just the “side effects,” if you like. Just another really, really good reason to adopt this wisdom.

Salt lovers can argue (and will) that this is just one, non-double-blind controlled study and doesn't prove our position. This study is directly supportive of all scientific discovery regarding the long-term negative health effects of consuming a high sodium diet. EN

***This new data shows that with Endurolytes, athletes have a proven alternative to “salt pills” and consuming massive amounts of sodium.***



# ALL-STAR CLIENT EXPERIENCE

## Here's what clients like you are saying

- *"Quick and efficient. I also really like the suggestion added when looking for a product. Like when I'm looking at HEED and it suggests Endurolytes."*
- *"The best products and the best service in the endurance supplements industry!"*
- *"Hammer products rock. I have been with you folks for a while as an ambassador and used several new products this past year: Phytomax, Phytolean, CBD, Race Caps Supreme, all with great results. Keeping it real Hammer, I am stoked for my next trail marathon using all the fueling products from Hammer!"*
- *"The market is flooded with CBD products. Hammer is hands down the best I've run across."*
- *"I've been using HEED for decades. When I run low, I go to the website, refill my shopping cart, and have new product with free shipping in 4 days. Consistency and dependability are important to me."*
- *"I've used Hammer over the years, that I bought through outdoor stores. Within the last year I decided to go right to the source and buy direct from Hammer online and I'm very glad I did. Excellent customer service that goes along with excellent product!"*
- *"I rely on Hammer products. The ease of shopping along with knowledgeable people to educate me on how to get the most out of Hammer products keeps me a loyal customer."*
- *"Hammer Nutrition provides an easy to use site, with excellent product descriptions, reviews, and quick cart updating selections."*
- *"I always like shopping with Hammer. Quick and easy! Plus they're always available if I have any questions and their return/exchange policy is the best!"*
- *"Excellent products and excellent customer service. I use Hammer products every day and have been for over 20 years."*
- *"Hammer is the kind of site that you'll find yourself re-ordering from. While some sites do 'subscriptions' to get the same items on a schedule, I love being able to go to Hammer and see my previous order and tweak it slightly and order just when I need it. The UX makes it really easy to adjust numbers and add items to your cart quickly, making shopping quick and easy."*



## We're here to help!

\*All reviews were submitted after placing an online order.



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\*\* Contains THC. Do not use if subject to drug testing.



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# Doctor-Recommended, Client **APPROVED!**



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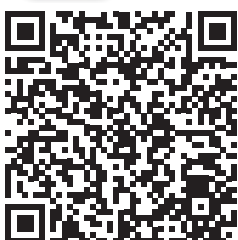
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4-count Hammer  
CBD sampler



**100mg**  
**FREE CBD**  
**on Us!**



expires  
10.31.21

**800.336.1977**





## RUNNING LOCAL

Tor Gudmundsen at the finish line of the Whitefish Marathon, after running a 3:18, just 7 minutes off his course record set in 2018.

Apple Cinnamon Hammer Gel® and Anti-Fatigue Caps kept Tor's pace up on the cool Flathead Valley day.



✓ **THE BEST QUALITY** ✓ **THE BEST PRICES**

✓ **GUARANTEED**

If you are buying CBD somewhere else, you may be getting an inferior product.

And you are probably paying too much.



Hammer Nutrition, the leader in endurance nutrition for 34 years, is now the leader in CBD. After studying this amazing new product and using it for years, in 2018 we partnered with the largest vertically integrated producer, manufacturer, and distributor of hemp-derived phytocannabinoids (CBD) in North America. We have the research, education, and trained support staff to be your “go-to” for all things CBD.

### ***Friends don't let friends overpay for CBD!***

Start referring your family and friends today. Our generous Referral Reward program is ideal for introducing all of your friends and family to the amazing benefits of CBD and getting some nice Hammer Bucks in your account. They get 15% off their first order, and you get a 25% credit to your account.

#### **CBD Softgels**

10 mg 4 ct	<b>\$0.17 per mg</b>
10 mg 30 ct	<b>\$0.13 per mg</b>
10 mg 90 ct	<b>\$0.10 per mg</b>
25 mg 4 ct	<b>\$0.13 per mg</b>
25 mg 30 ct	<b>\$0.09 per mg</b>
25 mg 90 ct	<b>\$0.08 per mg</b>

#### **CBD Tinctures**

Hydro 250 mg	<b>\$0.10 per mg</b>
Classic 250 mg	<b>\$0.08 per mg</b>
Classic 750 mg	<b>\$0.08 per mg</b>
Classic 1500 mg	<b>\$0.06 per mg</b>

#### **CBD Balms**

30 mg 0.15 oz	<b>\$0.16 per mg</b>
500 mg 2 oz	<b>\$0.10 per mg</b>

**ORDER TODAY!**



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## Endurance News

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